PACIFIC SALMON COMMISSION
JOINT CHINOOK TECHNICAL COMMITTEE

2012 EXPLOITATION RATE ANALYSIS AND MODEL CALIBRATION

REPORT TCCHINOOK (12)-4

December 20, 2012

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LIST OF ACRONYMS WITH DEFINITIONS

AABM	Aggregate Abundance Based Management
AC	Allowable Catch
AI	Abundance Index
ADF&G	Alaska Department of Fish & Game
AEQ	Adult Equivalent
Agreement	2008 Pacific Salmon Treaty Annex
AUC	Area-Under-the-Curve
AWG	Analytical Working Group of the CTC
ERA	Exploitation Rate Analysis
BCAFC	British Columbia Aboriginal Fisheries Commission
BTR	Base Terminal Run
C&S	Ceremonial & Subsistence
CBC	Central British Columbia Fishing area – Kitimat to Cape Caution
CCMP	Comprehensive Chinook Management Plan
CDFO	Canadian Department of Fisheries & Oceans
CI	Confidence Interval
CNR	Chinook Non-retention
CR	Columbia River
CRITFC	Columbia River Intertribal Fish Commission
CRFMP	Columbia River Fishery Management Plan
CTC	Chinook Technical Committee
CUS	Columbia Upriver Spring Chinook stock
CWT	Coded Wire Tag
DIT	Double Index Tag
ESA	U.S. Endangered Species Act
Est+fw	Estuary Plus Fresh Water Area
FL	Fork Length
FMP	PFMC Framework Management Plan
FNC	First Nations Caucus
FOG	Fisheries Operational Guidelines
FR	Fraser River
GCG	Gene Conservation Group
GW	Gitwinksihlkw
GS	Strait of Georgia
HOR	Hatchery Origin Returns
IDFG	Idaho Department of Fish & Game
IDL	InterDam Loss
IM	Incidental Mortality
ISBM	Individual stock based management
LFR	Lower Fraser River
LGS	Lower Strait of Georgia
mar	Marine Area
mar+fw	Marine Plus Fresh Water Area
MOC	Mid Oregon Coast
MRP	Mark-Recovery Program
MSF	Mark-Selective Fishery
MSH	Maximum sustainable harvest
MSY	Maximum Sustainable Yield for a stock, in adult equivalents
MSY ER	Exploitation Rate sustainable at the escapement goal for a stock, in AEQs
NBC	Northern British Columbia Dixon Entrance to Kitimat including Queen Charlotte Islands
NA	Not Available
NBC	Northern British Columbia Dixon Entrance to Kitimat including Queen Charlotte Islands
NM	Nautical Mile
NMFS	National Marine Fisheries Service
NOC	Oregon Coastal North Migrating Stocks
NPS	North Puget Sound
NPS-S/F	North Puget Sound Summer/Fall Chinook stock
NR	Not Representative
NWIFC	Northwest Indian Fisheries Commission
ODFW	Oregon Department of Fish & Wildlife
PFMC	Pacific Fisheries Management Council
PS	Puget Sound
PSC	Pacific Salmon Commission
PSARC	Pacific Scientific Advice Review Committee
PSMFC	Pacific States Marine Fisheries Commission
PST	Pacific Salmon Treaty
QDNR	Quinault Department of Natural Resources, Division of fisheries
QIN	Quinault Nation
QCI	Queen Charlotte Islands
RER	Recovery Exploitation Rate
SMSY	Escapement producing MSY
SEAK	Southeast Alaska Cape Suckling to Dixon Entrance
SPS	South Puget Sound
SWVI	Southwest Vancouver Island
TAC	Technical Advisory Committee
TBR	Transboundary Rivers
TTC	Transboundary Technical Committee
UAF	University of Alaska Fairbanks
UFR	Upper Fraser River
UGS	Upper Strait of Georgia
USCTC	U.S. members of the CTC
USFWS	U.S. Fish & Wildlife Service
UW	University of Washington
WA/OR	Ocean areas off Washington and Oregon North of Cape Falcon
WAC	Washington Coast (Grays Harbor northward)
WACO	Washington, Oregon, Columbia River Chinook stock group
WCVI	West Coast Vancouver Island excluding Area 20
WDFW	Washington Department of Fisheries and Wildlife

EXECUTIVE SUMMARY

This report contains the results of the annual exploitation rate assessment of CWT data through 2010 and the preseason Chinook model calibration for 2012 (CLB 1209). Results include the AIs for the AABM fisheries and ISBM indices for each country.

AABM Abundance Indices and Associated Catches

The pre- and postseason AIs for the three AABM fisheries, SEAK, NBC, and WCVI are presented in Table 1. The Agreement specifies that the AABM fisheries are to be managed through the use of the AIs. Each calibration provides the postseason AIs for the previous year and the preseason AIs for the current year. Preseason AIs are used to set total allowable catch limits in the upcoming fishing season. Subsequently, AIs and associated allowable catches from the first postseason model calibration for a fishing year are used to track catch overages and underages, per PST subparagraph 11(a)(i).

Table 1 Abundance Indices for 1999 to 2012 for the SEAK, NBC, and WCVI AABM fisheries. Postseason values for each year are from the first postseason calibration following the fishing year.

	SEAK		NBC		WCVI	
Year	Preseason	Postseason	Preseason	Postseason	Preseason	Postseason
1999	1.15	1.12	1.12	0.97	0.60	0.50
2000	1.14	1.10	1.00	0.95	0.54	0.47
2001	1.14	1.29	1.02	1.22	0.66	0.68
2002	1.74	1.82	1.45	1.63	0.95	0.92
2003	1.79	2.17	1.48	1.90	0.85	1.10
2004	1.88	2.06	1.67	1.83	0.90	0.98
2005	2.05	1.90	1.69	1.65	0.88	0.84
2006	1.69	1.73	1.53	1.50	0.75	0.68
2007	1.60	1.34	1.35	1.10	0.67	0.57
2008	1.07	1.01	0.96	0.93	0.76	0.64
2009	1.33	1.20	1.10	1.07	0.72	0.61
2010	1.35	1.31	1.17	1.23	0.96	0.95
2011	1.69	1.62	1.38	1.41	1.15	0.90
2012	1.52		1.32		0.89	

The 2008 Agreement specifies an allowable catch for each AI for each fishery. The maximum allowable treaty catch (total catch minus any hatchery add-on and exclusion catch) by fishery and year and the observed treaty catches are shown in Table 2.

Table 2 Preseason allowable catches for 1999 to 2012, and postseason allowable catches and observed catches for 1999 to 2010, for AABM fisheries. Postseason values for each year are from the first postseason calibration following the fishing year.

PST Treaty Allowable and Observed Catches									
Year	SEAK (T, N, S) [1]			NBC (T, S)			WCVI (T, S)		
	Pre-season Allowable Catch	Post-season Allowable Catch	Observed Catch	Pre-season Allowable Catch	Post-season Allowable Catch	Observed Catch	Pre-season Allowable Catch	Post-season Allowable Catch	Observed Catch
1999	192,800	184,200	198,842	145,600	126,100	86,726	128,300	107,000	36,413
2000	189,900	178,500	186,493	130,000	123,500	31,900	115,500	86,200	101,438
2001	189,900	250,300	186,919	132,600	158,900	43,500	141,200	145,500	117,670
2002	356,500	371,900	357,133	192,700	237,800	150,137	203,200	196,800	165,036
2003	366,100	439,600	379,519	197,100	277,200	191,657	181,800	268,900	175,821
2004	383,500	418,300	417,019 421,666 [2]	243,600	267,000	241,508	192,500	209,600	216,624
2005	416,400	387,400	391,999	246,600	240,700	243,606	188,200	179,700	202,662
2006	346,800	354,500	362,948	223,200	200,000	215,985	160,400	145,500	146,883
2007	329,400	259,200	329,804	178,000	143,000	144,235	143,300	121,900	139,150
2008	170,000	152,900	173,382	124,800	120,900	95,647	162,600	136,900	145,726
2009 [3]	218,800	176,000	230,647	143,000	139,100	109,470	107,800	91,300	124,617
2010	221,800	215,800	231,591	152,100	160,400	136,613	143,700	142,300	139,047
2011	294,800	283,300	290,715	182,400	186,800	122,660	196,800	134,800	204,232
2012	266,800			173,600			133,300		

[1] Nomenclature is T for troll, N for net, and S for sport.

[2] The lower value resulted from subtracting a disputed terminal exclusion catch for the Stikine River in 2004. Catch accounting has since been defined in the Transboundary Agreement.

[3] This is the first catch year in which fisheries operated under the provisions of the 2009 agreement.

Table 3 shows the differences between the postseason allowable catches and the observed treaty catches in AABM fisheries for 1999–2011, and the cumulative deviation for those years. In 2011, SEAK observed catch was 2.6% higher than the postseason allowable catch; the NBC observed catch was 34.3% lower than the postseason allowable catch; and WCVI observed catch was 51.5% higher than the postseason allowable catch. In SEAK, observed treaty catches have been below final allowable catches for four of the thirteen years; the cumulative deviation is a 1.8% overage. In NBC, observed catches have been below the final allowable catches in ten of the thirteen years; the cumulative deviation is a 23.8% underage. In WCVI, observed catches have been below allowable catches in five of the thirteen years; the cumulative deviation is a 2.6% underage.

Overages and underages in AABM catches, relative to the first postseason calibration for a fishing year (Table), can arise due to the in-season management system, errors in the preseason calibration process (e.g., forecast error), or a combination of the two. The relative influence of each was evaluated by inspecting differences in actual landed catch and allowable catches from both preseason and postseason calibrations (Table 4). In 2011, regarding the in-season management system, the actual landed catch was less than the preseason allowable catch by 4,085 Chinook salmon in SEAK and by 59,740 in NBC. For WCVI, the actual landed catch was 7,432 more than the preseason allowable catch. In terms of the postseason allowable catches for evaluation of the provisions of the PST (subparagraph 11(a)(i)), actual catches exceeded the postseason allowable catches by 7,415 Chinook salmon in SEAK and by 69,140 in WCVI. Actual landed catch in NBC was 64,140 fish less than the postseason allowable catch.

Table 3 Deviations in numbers of Chinook salmon caught and percentages from allowable catches derived from the postseason AI (Table 2) for Pacific Salmon Treaty AABM fisheries in 1999 to 2011. Postseason values for each year are from the first postseason calibration following the fishing year.

Year	SEAK		NBC		WCVI	
	Number of Fish	Percent Difference	Number of Fish	Percent Difference	Number of Fish	Percent Difference
1999	14,642	7.9%	-39,374	-31.2%	-70,587	-66.0%
2000	7,993	4.5%	-91,600	-74.2%	15,238	17.7%
2001	-63,381	-25.3%	-115,400	-72.6%	-27,830	-19.1%
2002	-14,767	-4.0%	-87,663	-36.9%	-31,764	-16.1%
2003	-60,081	-13.7%	-85,543	-30.9%	-93,079	-34.6%
2004	-1,281 3,366	-0.3% 0.8%[1]	-25,492	-9.5%	7,024	3.4%
2005	4,599	1.2%	2,906	1.2%	22,962	12.8%
2006	8,448	2.4%	15,985	8.0%	1,383	1.0%
2007	70,604	27.2%	1,235	0.9%	17,250	14.2%
2008	20,482	13.4%	-25,253	-20.9%	8,826	6.4%
2009[2]	54,647	31.0%	-29,630	-21.3%	33,317	36.5%
2010	15,791	7.3%	-23,787	-14.8%	-3,253	-2.3%
2011	7,415	2.6%	-64,140	-34.3%	69,432	51.5%
Cum.	65,110 69,758	1.8% 1.9%[1]	-567,756	-23.8%	-51,081	-2.6%

[1] The lower value resulted from subtracting a disputed terminal exclusion catch for the Stikine River in 2004. Catch accounting has since been defined in the Transboundary Agreement.

[2] This is the first catch year in which fisheries operated under the provisions of the 2009 agreement; cumulative deviations span the entire record that is displayed.

Table 4 Deviations in actual landed catch (LC), allowable landed catch determined from preseason model calibration (PreALC), and allowable landed catch determined from postseason model calibration (PostALC) for AABM fisheries from 1999 to 2011. Postseason values for each year are from the first postseason calibration following the fishing year. The difference between LC and PreALC represents the consequences of the management system employed in the year. The difference between PreALC and PostALC represents consequences of the forecast procedures and data used in forecasting the PreALC by the PSC Chinook Model. The difference between LC and PostALC represents the combined effects of both processes.

Year	SEAK			NBC			WCVI		
	LC–PreALC	PreALC–PostALC	LC–PostALC	LC–PreALC	PreALC–PostALC	LC–PostALC	LC–PreALC	PreALC–PostALC	LC–PostALC
1999	6,042	8,600	14,642	-70,473	19,500	-50,973	-89,760	21,300	-68,460
2000	-3,407	11,400	7,993	-97,952	6,500	-91,452	-26,883	29,300	2,417
2001	-2,981	-60,400	-63,381	-88,849	-26,300	-115,149	-20,896	-4,300	-25,196
2002	633	-15,400	-14,767	-42,579	-45,100	-87,679	-45,314	6,400	-38,914
2003	13,419	-73,500	-60,081	-2,938	-80,100	-83,038	-8,239	-87,100	-95,339
2004	33,519 38,166	-34,800 -34,800	-1,281 3,366[1]	-294	-23,400	-23,694	22,752	-17,100	5,652
2005	-24,401	29,000	4,599	-2,994	5,900	2,906	11,279	8,500	19,779
2006	16,148	-7,700	8,448	-7,215	23,200	15,985	-14,915	14,900	-15
2007	404	70,200	70,604	-33,765	35,000	1,235	-2,686	21,400	18,714
2008[2]	3,382	17,100	20,482	-29,153	3,900	-25,253	-16,874	25,700	8,826
2009	11,847	42,800	54,647	-34,330	4,700	-29,630	16,817	16,500	33,317
2010	9,791	6,000	15,791	-15,487	-8,300	-23,787	-4,653	1,400	-3,253
2011	-4,085	11,500	7,415	-59,740	-4,400	-64,140	7,432	62,000	69,432

[1] The lower value resulted from subtracting a disputed terminal exclusion catch for the Stikine River in 2004. Catch accounting has since been defined in the Transboundary Agreement.
[2] This is the first catch year in which fisheries operated under the provisions of the 2009 agreement.

ISBM Indices

For ISBM fisheries, the 2008 Agreement specifies that Canada and the United States reduce base period exploitation rates on specified stocks by 36.5% and 40%, equivalent to ISBM indices of 63.5% and 60%, respectively. This requirement is contained in Chapter 3 section 8(c) of the Agreement and is referred to as the 'general obligation' and does not apply to stock groups that achieve their CTC agreed escapement goals. The Agreement specifies that the ISBM indices be forecasted preseason and evaluated postseason for each escapement indicator stock listed in Attachments I to V of the Chinook Chapter. Postseason ISBM indices were computed for 2010 using CWT data and preseason ISBM indices were computed for 2012 using the Chinook model.

Postseason ISBM Indices for 2010

Canadian postseason ISBM indices indicated ISBM exploitation rates were reduced more than

required under the Agreement for the 7 stocks for which the indices were computed (Table 5).

Five of the 16 U.S. postseason ISBM indices computed were reduced more than required. The other 11 U.S. postseason ISBM indices exceeded 0.60, but these stocks met or exceeded their CTC-accepted escapement goals, and thus are exempted from the general obligation (Table 6).

Preseason ISBM Indices for 2012

Seven of the 19 Canadian preseason ISBM indices, based on outputs from calibration 1209, are predicted to exceed the allowable ISBM index of 0.635 in 2012 (Table 5). Five of these seven stocks are Puget Sound Natural Summer/Fall stocks that do not have CTC-accepted escapement goals.

Of the 23 U.S. ISBM indices calculated from calibration 1209, ten are predicted to exceed the allowable limit of 0.60 for U.S. ISBM fisheries in 2012 (Table 6). All but Grays Harbor, Green River, and Stillaguamish (which has exploitation rate objectives) have CTC agreed escapement goals: Quillayute, Upriver Brights, Deschutes, Mid-Columbia Summers, Nehalem, Siletz, and Siuslaw. Of the stocks with goals, all were above their goals in 2011.

Table 5 Canadian 2010 ISBM indices based on 2010 and 2012 PSC Chinook Model, 2012 CWT analysis and the 2012 indices predicted from the 2012 PSC Chinook Model. Footnotes appear on the following page.

Stock Group	Escapement Indicator Stock	2010 Model Indices for 2010	2012 Model Indices for 2010	CWT Indices for 2010	2012 Model Indices for 2012
Lower Strait of Georgia	Cowichan	0.203 [8]	0.258 [6]	0.261 [4]	0.443 [6]
	Nanaimo			NA [1,5]	
Fraser Late	Harrison River [2]	0.138	0.161	0.134 [7]	0.256
North Puget Sound Natural Springs	Nooksack	0.568	0.154	0.014	0.339
	Skagit	0.568	0.154	NA	0.340
Upper Strait of Georgia	Klinaklini, Kakweikan, Wakeman, Kingcome, Nimpkish	0.122	0.109	0.182	0.596
Fraser Early (spring and summers)	Upper Fraser, Mid Fraser, Thompson	0.121	0.109	NA	0.226
West Coast Vancouver Island Falls	WCVI (Artlish, Burman, Kauok, Tahsis, Tashish, Marble)	0.122	0.188	0.135 [8]	0.636
Puget Sound Natural Summer/Falls	Skagit	0.709	0.114	NA	1.421
	Stillaguamish	0.791	0.177	0.083	1.329
	Snohomish	0.718	0.116	NA	1.359
	Lake Washington	0.690	0.149	NA	0.991 [9]
	Green River	0.670	0.149	0.151	1.000
North / Central B. C.	Yakoun, Nass, Skeena, Area 8	0.177	0.126	NA	0.536
Washington Coastal Fall Naturals [3]	Hoko, Grays Harbor, Queets [2], Hoh [2], Quillayute [2]	0.134	0.101	NA	0.357
Columbia River Falls [3]	Upriver Brights [2]	0.110	0.071	NA	0.572
	Deschutes	0.110	0.071	NA	0.572
	Lewis [2]	0.920	0.016	NA	3.345
Columbia R Summers [3]	Mid-Columbia Summers [2]	0.084	0.051	NA	0.296
Far North Migrating OR Coastal Falls [3]	Nehalem [2], Siletz [2], Siuslaw [2]	NA	0.021	NA	0.540

[1] Not available (NA) because of insufficient data (lack of stock specific tag codes, base period CWT recoveries, etc).
[2] Stock or stock group with a CTC agreed escapement goal.
[3] Stock group listed in Annex 4, Chapter 3, Attachment V.
[4] An inconsistency was discovered between the approaches used to calculate the model-based and CWT-based

indices. The former included harvest rates for terminal sport while the latter did not. Terminal sport harvest rates are now included in the calculation of both indices. Further review is yet required to determine whether the base period terminal sport harvest rates obtained from analyses of Big Qualicum CWT recoveries adequately represent impacts that would have occurred on Cowichan Chinook.

[5] Several problems have been identified in the approach previously used to calculate the CWT-based indices for Nanaimo Chinook. Until these problems are resolved, indices for this stock will not be reported.

[6] Although model-based indices were previously calculated separately for Cowichan and Nanaimo, these did not adequately represent impacts on either LGS stock because the model-based data represent an aggregate of the two stocks and methods do not currently exist to correctly disaggregate these data for calculation of the ISBM values. Until such methods are developed, a single index value only will be reported representing the aggregate.

[7] The terminal sport harvest rates for Chilliwack Hatchery Chinook, the indicator stock, were removed from the calculation for the Harrison River naturals because sport harvest has been essentially zero on the natural population.

[8] An inconsistency was discovered between the approaches used to calculate the model-based and CWT-based indices. The former included harvest rates for terminal sport while the latter did not. Terminal sport harvest rates are now included in the calculation of both indices. A more extended review of the indices for WCVI Chinook will be carried out to determine whether they adequately represent impacts on the WCVI wild aggregate.

[9] For Canadian ISBM fisheries, Lake Washington and Green the same distribution and index value are assumed.

Table 6 U.S. 2010 ISBM indices based on 2010 and 2012 PSC Chinook Model, 2012 CWT analysis and the 2012 indices predicted from the 2012 PSC Chinook Model. Footnotes appear on the following page.

Stock Group	Escapement Indicator Stock	2010 Model Indices for 2010	2012 Model Indices for 2010	CWT Indices for 2010	2012 Model Indices for 2012
Washington Coastal Fall Naturals	Hoko	0.130	0.424	NA [1]	0.378
	Grays Harbor	0.382	0.579	0.69	0.604
	Queets [4]	0.285	0.186	0.67	0.179
	Hoh [4]	0.987	0.454	1.00	0.443
	Quillayute [4]	0.963	1.188	0.67	1.151
Columbia River Falls	Upriver Brights [4]	0.801	0.782	1.75	0.894
	Deschutes [4]	1.004	0.58	0.79	0.684
	Lewis [4]	0.505	0.353	0.43	0.442
Puget Sound Natural Summer / Falls	Skagit	0.261	0.177	NA	0.327
	Stillaguamish	0.117	0.056	0.38	1.054
	Snohomish	0.125	0.069	NA	0.332
	Lake Washington	0.517	0.295	NA	0.590
	Green R	0.520	0.299	0.34	0.631
Fraser Late	Harrison River [4]	0.209	0.587	0.47	0.448
Columbia R Summers	Mid-Columbia Summers [4]	1.142	1.711	9.81	1.369
Far North Migrating OR Coastal Falls	Nehalem [4]	0.916	1.939	1.21	1.696
	Siletz [4]	0.698	0.64	0.50	0.814
	Siuslaw [4]	2.028	1.304	0.77	1.646
North Puget Sound Natural Springs	Nooksack	0.181	0.059	0.70	0.171
	Skagit	0.245	0.087	NA	0.147
Lower Strait of Georgia [3]	Cowichan	0.216	0.404	4.33	0.370
	Nanaimo		NA	NA	NA
Upper Strait of Georgia [3]	Klinaklini, Kakweikan, Wakeman, Kingcome, Nimpkish	NC	NC [2]	NC [2]	NC [2]
Fraser Eary (spring and summers) [3]	Upper Fraser, Mid Fraser, Thompson	0.111	0.268	NA	0.228
West Coast Vancouver Island Falls [3]	WCVI (Artlish, Burman, Kauok, Tahsis, Tashish, Marble)	0.213	0.222	NA	0.420
North / Central B. C. [3]	Yakoun, Nass, Skeena, Area 8	NC [2]	NC [2]	NC [2]	NC [2]

[1] Not available (NA) because of insufficient data (lack of stock specific tag codes, base period CWT recoveries, etc).
[2] NC means that the current model assumes the stock is not caught in U.S. ISBM fisheries.
[3] Stock group listed in Annex 4, Chapter 3, Attachment IV.
[4] Stock with a CTC agreed escapement goal.

1 INTRODUCTION

This report describes the methods and results of the cohort analysis, used to estimate exploitation rates from coded wire tag (CWT) data, and the Pacific Salmon Commission (PSC) Chinook model calibration. The results of the 2012 preseason calibration (CLB 1209) are based on the exploitation rate analysis (ERA) using CWT data through catch year 2009, coast-wide data on catch, spawning escapements and age structure through 2010, and forecasts of Chinook salmon returns expected in 2012. This chapter includes:

1. estimated postseason abundance indices for 1979 through 2010 and the preseason projection for 2012 for the aggregate abundance based management (AABM) fisheries,
2. estimated non-ceiling indices, referred to as the individual stock based management (ISBM) indices in this report, for 1999 to 2010 and modeled ISBM projections for the 2012 ISBM fisheries,
3. estimated stock composition for 1979 through 2011 and a projection for 2012 for the AABM and other fisheries, and
4. estimated fishery indices (harvest rates) for the AABM fisheries.

Appendix A shows the relationship between the exploitation rate indicator stocks, escapement indicator stocks, model stocks, and Pacific Salmon Treaty (PST) Annex stocks. Appendices B to I present additional output from the exploitation rate analysis and model calibration beyond the summaries presented in the main body of the report. Appendix B provides the time series of ISBM CWT indices and ISBM model indices from calibration 1209. Appendix C shows the percent distribution of landed catch and total mortality by catch year for exploitation rate indicator stocks. Appendix D shows CWT survival indices (completed brood years only) for exploitation rate indicator stocks and age 2 or 3 Chinook model (EV) survival indices for corresponding model stocks. Appendix E has the time series of brood year exploitation rates for the CWT indicator stocks. Appendix F shows the model estimates of stock composition in AABM and other sport and troll fisheries. Appendix G lists the incidental mortality rates used in the CTC model. Appendix H gives the time series of total abundance indices (AIs) for the AABM fisheries, and Appendix I provides the AIs for each model stock for each AABM fishery. Appendix J presents the time series of CWT-based fishery exploitation rate indices by stock, age, and fishery. CWT data quality issues and their resolution are detailed in Appendix K.

1.1 Methods

The exploitation rate assessment is performed through cohort analysis of CWT release and recovery data (CTC 1988). Cohort analysis is the reconstruction of the cohort at a given age accounting for the exploitation history of a given stock and brood year. This technique is used to produce a variety of statistics, including total exploitation rates, age and fishery specific exploitation rates, maturation rates, pre-age 2 recruitment survival indices (Appendix D), and annual distribution of fishery-related mortalities. Estimates of age and fishery-specific exploitation and maturation rates from the cohort analysis are combined with data on catches, escapements, non-retention, and enhancement to complete the annual calibration of the CTC Model. The calibration procedure estimates pre-age 2 survival to recruitment for the stocks included in the model.

Results from the annual preseason calibration of the Chinook model are used to calculate: 1) AIs

for the three AABM fisheries; 2) postseason AIs for the previous year; and 3) preseason ISBM indices. Post season ISBM indices are computed through a separate process using the CWT data that comes out of the exploitation rate analysis. Projected AIs for 2012 are used to determine the allowable 2012 catch of Treaty Chinook salmon for AABM fisheries. Postseason AIs are used to appraise the previous (2011) season's allowable catches and to evaluate compliance for AABM fisheries. For the ISBM fisheries, the Agreement specifies that Canada and the United States will reduce the exploitation rate from the 1979–1982 base period by 36.5% and 40.0%, respectively, on stocks that do not achieve their Chinook Technical Committee (CTC) agreed escapement goals. The ISBM index is used to estimate annual exploitation rates relative to the base period. Postseason ISBM indices for 2010 are computed using results of the exploitation rate analysis (2011 will be available next year). Forecasts of the 2012 ISBM indices are computed using the PSC Chinook model. The Agreement specifies that the postseason ISBM indices estimated through exploitation rate analysis of CWT recoveries will be used to assess the ISBM index performance postseason, however the postseason indices are computed on a 2 year-lag because some data are reported two years later.

2 EXPLOITATION RATE ASSESSMENT (THROUGH CATCH YEAR 2011)

The exploitation rate assessment is performed through cohort analysis, a procedure that reconstructs the exploitation history of a given stock and brood year using CWT release and recovery data (CTC 1988). The procedure produces a variety of statistics, including total exploitation rates, age- and fishery-specific exploitation rates, maturation rates, pre-age 2 recruitment survival indices, and annual distribution of fishery-related mortalities. Estimates of age- and fishery-specific exploitation and maturation rates from the cohort analysis are combined with data on catches, escapements, non-retention, and enhancement to complete the annual calibration of the PSC Chinook model.

The CTC currently monitors 42 CWT-tagged exploitation rate indicator stocks (Table 2-1); tagging has been discontinued for some stocks while new stocks have been added. An exploitation rate indicator stock is not used in the ERA if: *i*) the number of CWT recoveries is limited (minimum of 10 estimated recoveries for a given stock and age combination), *ii*) there is no quantitative estimate of tags in the spawning escapement, or *iii*) less than 4 brood years with CWT recoveries (see footnotes in Table 2-2). The indicator stocks used for exploitation rate analysis and the type of analysis performed are shown in Table 2-2. The relationships between the exploitation rate indicator stocks, model stocks, and PST Annex stocks are shown in Appendix A. Extrapolation of results to similar stocks and/or generalizations about fishery impacts on those stocks will only be appropriate to the extent that an exploitation rate indicator stock accurately represents such stocks.

2.1 Brood Year Exploitation Rates (Appendix E)

Brood year exploitation rates provide the best measure of the cumulative impact of fisheries upon all age classes of a stock. The rates are computed as the ratio of adult equivalents (AEQ) total fishing mortality to AEQ total fishing mortality plus escapement. The AEQ factor represents the proportion of fish of a given age that would, in the absence of fishing, subsequently leave the ocean to return to the terminal area on the spawning migration. The numerator of the brood year exploitation rate may be partitioned into components for AEQ reported catch and AEQ incidental mortality, with each component occurring in either ocean fisheries or freshwater fisheries.

The exploitation rate on an indicator stock may differ from the exploitation rate on the wild stock it represents if the indicator stock is of hatchery origin and subject to terminal fisheries directed at harvesting surplus hatchery production. In the case of the brood year exploitation rate, this difference was addressed by computing a rate for ocean fisheries and a total for all fisheries. Ocean fisheries were defined to include marine sport and troll fisheries and CWT recoveries of ocean age 2 and age 3 fish in all non-terminal net fisheries. By partitioning the fisheries in way, a more appropriate measure of brood year exploitation rate on wild stocks was developed. The method selected for each exploitation rate indicator stock is given in Table 2-2. If broods are incomplete, but have data through age 4 (age 5 for spring stocks), then average maturation rates are applied to predict the completed brood value.

Table 2-1. CWT exploitation rate indicator stocks, their location, run type, and smolt age.

Stock/Area	Exploitation Rate Indicator Stocks	Hatchery	Run Type	Smolt Age
Southeast Alaska	Alaska Spring	Crystal Lake, Whitman Lake, Little Port Walter, Deer Mountain, Neets Bay	Spring	Age 1
North/Central BC	Kitsumkalum	Deep Creek	Summer	Age 1
	Atnarko*	Snootli	Summer	Age 0
WCVI	Robertson Creek	Robertson Cr.	Fall	Age 0
Strait of Georgia	Quinsam	Quinsam	Fall	Age 0
	Puntledge	Puntledge	Summer	Age 0
	Big Qualicum	Big Qualicum	Fall	Age 0
	Cowichan	Cowichan	Fall	Age 0
	Nanaimo	Nanaimo	Fall	Age 0
Fraser River	Chilliwack (Harrison Stock)[1]	Chilliwack	Fall	Age 0
	Harrison	Chehalis	Fall	Age 0
	Lower Shuswap	Shuswap Falls	Summer	Age 0
	Nicola	Spius Creek	Spring	Age 1
	Dome	Penny Creek	Spring	Age 1
North Puget Sound	Skagit Spring Fingerling	Marblemount	Spring	Age 0
	Skagit Spring Yearling[1]	Marblemount	Spring	Age 1
	Skagit Summer Fingerling	Marblemount	Summer	Age 0
	Nooksack Spring Fingerling	Kendall Cr.	Spring	Age 0
	Nooksack Spring Yearling	Kendall Cr.	Spring	Age 1
	Samish Fall Fingerling [1]	Samish	Summer/Fall	Age 0
Central Puget Sound	Stillaguamish Summer Fingerling	Stillaquamish Tribal	Summer/Fall	Age 0
	South Puget Sound Fall Fingerling[1]	Soos Cr. / Grovers Cr.	Summer/Fall	Age 0
	Univ. of Washington Accelerated	UW	Summer/Fall	Age 0
South Puget Sound	South Puget Sound Fall Yearling	Tumwater Falls	Summer/Fall	Age 1
	White River Spring Yearling[2]	White R.	Spring	Age 1
	Nisqually Fall Fingerling [1]	Clear Cr.	Summer/Fall	Age 0
Hood Canal	George Adams Fall Fingerling [1]	George Adams	Summer/Fall	Age 0
Juan de Fuca	Elwha Fall Fingerling	Lower Elwha	Summer/Fall	Age 0
	Hoko Fall Fingerling	Hoko	Summer/Fall	Age 0
North Wash. Coast	Sooes Fall Fingerling	Makah NFH	Fall	Age 0
	Queets Fall Fingerling (wild brood)	Salmon R. (WA)	Fall	Age 0
Willamette R.	Willamette Spring[1]	Willamette H	Spring	Age 1
Lower Columbia R.	Cowlitz Tule (WA)	Cowlitz	Fall Tule	Age 0
	Spring Creek Tule (WA)[1]	Spring Cr. NFH	Fall Tule	Age 0
	Columbia Lower River Hatchery[1]	Big Creek	Fall Tule	Age 0
	Lewis River Wild	Wild	Fall Bright	Age 0
Upper Columbia R.	Columbia Summers (WA)[3]	Wells	Summer	Age 0
	Columbia Upriver Bright	Priest Rapids	Fall Bright	Age 0
	Hanford Wild	Wild	Fall Bright	Age 0
Snake River	Lyons Ferry [4,1]	Lyons Ferry	Fall Bright	Age 0
North Oregon Coast	Salmon River	Salmon R.	Fall	Age 0
Mid Oregon Coast	Elk River	Elk R.	Fall	Age 0

[1] DIT tags associated with this stock; [2] No longer adipose fin clipped; [3] Model base period tag groups are fingerlings, ERA tag groups are a combination of fingerlings and yearlings; [4] Subyearlings have been CWT-tagged since brood year 1986, except for brood years 1993 through 1997; *2012 is the first reporting for this indicator stock, see Appendix K for an associated narrative.

Table 2-2. The 42 CWT exploitation rate indicator stocks used in the exploitation rate analysis and the data derived from them: fishery, ISBM and survival indices, brood exploitation rates (BER), and stock catch distribution (Dist) with quantitative escapement estimates (Esc) and tagging during base years 1979-82.

Exploitation Rate Indicator Stocks	Fishery Index	ISBM Index	BER[1]	Survival Index	Dist	Esc	Base Tagging
Alaska Spring	Yes	—	Total	Yes	Yes	Yes	Yes
Kitsumkalum	—	—	Total	Yes	Yes	Yes	—
Atnarko*	Yes	No	Total	Yes	Yes	Yes	Yes
Robertson Creek	Yes	Yes	Ocean[1]	Yes	Yes	Yes	Yes
Quinsam	Yes	Yes	Total	Yes	Yes	Yes	Yes
Puntledge	Yes	—	Total	Yes	Yes	Yes	Yes
Big Qualicum	Yes	Yes	Total	Yes	Yes	Yes	Yes
Nanaimo	—	Yes	Total	Yes	Yes	Yes	Yes
Dome	—	—	Total	Yes	Yes	Yes	—
Lower Shuswap	—	—	Total	Yes	Yes	Yes	Yes
Nicola	—	—	Total	Yes	Yes	Yes	—
Cowichan	Yes	Yes	Total	Yes	Yes	Yes	—
Chilliwack (Harrison Fall Stock)	—	Yes	Total	Yes	Yes	Yes	—
Harrison	—	—	Total	Yes	Yes	Yes	—
Nooksack Spring Fingerling	—	—	4	—	Yes	Yes	—
Nooksack Spring Yearling	—	Yes	4	Yes	Yes	Yes[3]	—
Skagit Spring Fingerling	—	—	Ocean	—	Yes	Yes	—
Skagit Spring Yearling	—	—	Ocean	Yes	Yes	Yes[3]	—
Samish Fall Fingerling	Yes	—	Ocean	Yes	Yes	Yes[3]	Yes
Skagit Summer Fingerling	—	—	Ocean	—	Yes	Yes	—
Stillaguamish Summer Fingerling	—	Yes	4	—	Yes	—	—
Nisqually Fall Fingerling	—	—	4	—	Yes	—	Yes
University of Washington Accelerated	Yes	2	2	—	Yes	Yes[3]	Yes
George Adams Fall Fingerling	Yes	2	2	Yes	Yes	Yes[3]	Yes
South Puget Sound Fall Fingerling	Yes	Yes	Ocean	Yes	Yes	Yes[3]	Yes
South Puget Sound Fall Yearling	Yes	2	2	Yes	Yes	Yes[3]	Yes
Squaxin Pens Fall Yearling	—	2	2	Yes	Yes	Yes[3]	—
White River Spring Yearling	—	—	4	Yes	Yes	Yes[3]	Yes
Elwha Fall Fingerling	—	—	4	Yes	Yes	—	—
Hoko Fall Fingerling	—	—	Ocean	Yes	Yes	Yes	—
Sooes Fall Fingerling	—	—	Ocean	Yes	Yes	Yes	—
Queets Fall Fingerling	—	Yes	4	Yes	Yes	—	Yes
Willamette Spring	Yes	—	Ocean	Yes	Yes	Yes	Yes
Columbia Summers	Yes	Yes	Total	Yes	Yes	Yes	—
Cowlitz Tule	Yes	—	Ocean	Yes	Yes	Yes	Yes
Spring Creek Tule	Yes	—	2	Yes	Yes	Yes	—
Columbia Lower River Hatchery	Yes	—	2	Yes	Yes	Yes	Yes
Upriver Bright	Yes	Yes	Total	Yes	Yes	Yes	Yes
Hanford Wild	—	—	Total	Yes	Yes	Yes	—
Lyons Ferry	—	—	Total	Yes	Yes	Yes	—
Lewis River Wild	Yes	Yes	Total	Yes	Yes	Yes	Yes
Salmon River	Yes	Yes	Ocean	Yes	Yes	Yes	Yes

[1]For stocks of hatchery origin and subject to terminal fisheries directed at harvesting surplus hatchery production, ocean fisheries do not include terminal net fisheries. Otherwise, total fishery includes terminal net fisheries. [2]Hatchery stock not used to represent naturally spawning stock. [3]Only hatchery rack recoveries are included in escapement. [4]Insufficient escapement data for exploitation rate analysis.

*This report is the first in which exploitation patterns for this new indicator stock are provided (see Appendix K).

The brood year exploitation rate (BYEXP) is calculated as:

$$BYEXP_{BY,F} = \frac{\sum_{a=Minage}^{Maxage}\left(\sum_{f\in\{F\}} TotMorts_{BY,a,f} * AEQ_{BY,a,f}\right)}{\sum_{a=Minage}^{Maxage}\left(\sum_{f=1}^{Numfisheries} TotMorts_{BY,a,f} * AEQ_{BY,a,f} + Esc_{BY,a}\right)}$$

Equation 2.1

The AEQ rate is calculated as:

$$AEQ_{BY,a-1,f} = MatRte_{a-1,BY} + (1 - MatRte_{a-1,BY}) * Surv_a * AEQ_{BY,a,f}$$
$$AEQ_{BY,Maxage,f} \equiv 1.0$$

Equation 2.2

See Table 2-3 for a description of notation.

2.2 Brood Year Survival Rates and Indices (Appendix D)

The brood year survival of CWT-tagged smolts after release is calculated for most exploitation rate indicator stocks (Table 2-2). This survival rate is frequently referred to as the marine survival of the tag group but also includes any mortality occurring in freshwater following release. Interpretation of this survival rate is stock specific. Two measures of survival indices or patterns are computed: survival to the age 2 cohort based on CWT recoveries, and the "environmental variable" (EV) determined from the calibration of the PSC Chinook model (described in the following section). The CWT-based estimate is our most direct measure of a brood's survival, but this measure is finalized until the brood is complete (i.e., all ages have returned to spawn) and preliminary estimates are generated for incomplete brood using available CWT data and average maturation rates. The model EV parameter, however, provides a more current measure of the survival rates expected in brood years contributing to present and future fisheries.

For CWT data, the brood year survival rate for a subyearling stock is the estimated age 2 cohort (from the cohort analysis) divided by the number of CWT fish released, whereas for yearling stocks, the survival rate is calculated for the estimated age 3 cohort.

$$Age2CohSurv_{BY} = \frac{Cohort_{BY,2}}{TotCWTRelease_{BY}}$$

Equation 2.3

where CohortBY,2 is calculated recursively from the oldest age down to age-2 using:

$$Cohort_{BY,a} = \frac{\sum_{f=1}^{Numfisheries} TotMorts_{BY,a,f} + Esc_{BY,a} + Cohort_{BY,a+1}}{1 - NM_a}$$

Equation 2.4

Table 2-3. Parameter definitions for all equations except those used for the SPFI.

Parameter .	Description
a =	age class
A =	set of all ages that meet selection criteria
$AEQ_{BY,a,f}$ =	adult equivalent factor in brood year BY, age a, and fishery f (for terminal fisheries, AEQ = 1.0 for all ages)
$Age2CohSurv_{BY}$ =	cohort survival of CWT fish to age 2 (pre-fishery) for brood year BY
$AvgMatRte_a$=	average maturation rate for age a
$BPER$ =	base period years (1979 through 1982)
$BYEXP_{BY,F}$=	brood year exploitation rate in adult equivalent for brood year BY and fishery F
$BPISBMER_{f,a}$=	average base period ISBM exploitation rate for fishery f and age a
BY =	brood year
$Cohort_{BY,a}$ =	cohort by brood year BY and age a (*where stock is implied from context*)
$Cohort_{s,BY,a}$=	cohort by stock s, brood year BY and age a (*where stocks are defined explicitly in a summation*)
CY =	calendar year
$CYDist_{CY,F}$=	proportion of total stock mortality (or escapement) in a calendar year CY attributable to a fishery or a set of fisheries F
CY_{end} =	end year for average
CY_{start} =	start year for average
$d_{t,s,a}$=	distribution parameter for timestep t, stock s, and age a
$Esc_{Y,a}$ =	escapement past all fisheries for either brood year BY or calendar year CY and age a
$ER_{s,a,f,CY}$ =	exploitation rate (based on total mortality) at age a divided by cohort size at age a for stock s in fishery f in year CY
$EV_{n,BY}$ =	the stock productivity scalar for iteration n and brood year BY
f =	a single fishery
$f \in \{F\}$ =	a fishery f within the set of fisheries of interest
F =	ocean, terminal or other sets of fisheries or spawning escapements
$FI_{f,CY}$ =	fishery exploitation rate index for fishery f in year CY
$FP_{a,s,CY,f}$=	ratio of $ER_{s,a,f,CY}$ to $BPISBMER$
$ISBMIdxCY$ =	ISBM index for calendar year CY
$MatRte_{a-1,BY}$ =	maturity rate at next younger age by brood year
$Maxage$ =	maximum age of stock (generally age 6 for stream type stocks, age 5 for ocean type stocks)
$Minage$ =	minimum age of stock (generally age 3 for stream type stocks, age 2 for ocean type stocks)
$Morts_{CY,a,f}$=	landed or total fishing mortality in year CY and age a in fishery f
NMa =	annual natural mortality prior to fishing on age a cohort
$Numfisheries$ =	total number of fisheries
RT_{CY} =	ratio of the catch quota in the current year to the catch that would be predicted given current abundance, current size limits, and base period exploitation rates
s =	a particular stock
S =	set of all stocks that meet selection criteria
SC_{BY} =	ratio of the estimated and model predicted terminal run for brood year BY
$Surv_a$ =	survival rate (1-NM_a) by age
$TotMorts_{BY,a,f}$ =	total fishing related mortality for brood year BY or calendar year CY or during the base period BPER and age a in fishery f
$TotCWTRelease_{BY}$ =	number of CWT fish released in the indicator group in brood year BY

If ocean age-5 tags are absent, the age-4 cohort size is estimated using the following formula:

$$Cohort_{BY,4} = \frac{\sum_{f=Preterminal} TotMorts_{BY,4,f} + \frac{Esc_{BY,4} + \sum_{f=Terminal} TotMorts_{BY,4,f}}{AvgMatRte_4}}{1 - NM_4}$$

Equation 2.5

For each stock, equation 2.3 is then converted into a survival index for a given brood year by dividing the age 2 survival rate for the brood year by the average survival rate for all brood years.

2.3 Stock Distribution Patterns (Appendix C)

Brood year exploitation rates can indicate the fisheries that exploit a stock and the rates that occur on a specific brood, but they do not indicate the exploitation pattern on a stock during one catch year (across broods). To gain insight on impacts within a fishing year, stock mortality distributions (reported catch or total) are calculated over all ages in the fisheries in a catch year (if at least three brood years contribute to recoveries) as follows:

$$CYDist_{CY,F} = \frac{\sum_{a=Mmage}^{Maxage} \sum_{f \in \{F\}} Morts_{CY,a,f} * AEQ_{BY=CY-a,a,f}}{\sum_{a=Mmage}^{Maxage} \left(\sum_{f=1}^{Numfisheries} Morts_{CY,a,f} * AEQ_{BY=CY-a,a,f} + Esc_{CY,a} \right)}$$

Equation 2.6

It should be noted that mortality distributions may not indicate the relative distribution of an indicator stock. For example, closure of a fishery would result in no reported catch but this would not necessarily indicate zero abundance of the stock in that fishing area.

2.4 Fishery Indices (Appendix J)

When the Pacific Salmon Treaty was negotiated in 1985, catch ceilings and increases in stock abundance were expected to reduce harvest rates in fisheries. The fishery index (FI) provided a means to assess performance against this expectation. Relative to the base period, an index less than 1.0 represents a decrease from base period harvest rates while an index greater than 1.0 represents an increase. While the determination of allowable catch for AABM fisheries in the 1999 Agreement is different from the original PST catch ceilings, these fishery indices continue to provide a useful index of change in harvest rates in these fisheries. Fishery indices are used to measure relative changes in fishery harvest rates because it is not possible to directly estimate the fishery harvest rates.

Fishery indices are computed in AEQs for both reported catch and total mortality (reported catch plus estimated incidental mortality). The total mortality index provides a consistent means of representing changes in reported catch and incidental mortality, including those associated with regulatory measures such as minimum size limits and CNR periods. The AEQ exploitation rate (ER) is estimated by:

$$ER_{s,a,f,CY} = \frac{TotMorts_{s,a,f,CY} * AEQ_{s,BY=CY-a,a,f}}{Cohort_{s,BY=CY-a,a} * (1 - NM_a)}$$

Equation 2.7

and a ratio of means (ROM) estimator is used to calculate the fishery index (FI):

$$FI_{f,CY} = \frac{\sum_{s\in\{S\}}\sum_{a\in\{A\}} ER_{s,a,f,CY}}{\left(\frac{\sum_{BPER=79}^{82}\sum_{s\in\{S\}}\sum_{a\in\{A\}} ER_{s,a,f,BPER}}{4}\right)}$$

Equation 2.8

For AABM fisheries, indices are presented for troll gear only, although the catch limitations also apply to recreational fisheries and net fisheries in SEAK and the recreational fisheries in NBC and WCVI. As in past years, recoveries from the troll fishery were used because the majority of the catch and the most reliable CWT sampling occur in these fisheries. In addition, there are data limitations in the base period for the sport fisheries (e.g., few observed recoveries in NBC due to small fishery size). Because the allocation of the catch among gear types has changed in some fisheries (e.g., the proportion of the catch harvested by the sport fishery has increased in all AABM fisheries), the indices may not represent the harvest impact of all gear types.

The CTC uses fishery indices to reflect changes in fishery impacts relative to the base period (fishery years 1979–1982). The ROM estimator of the fishery index limits inclusion of stocks to those with adequate tagging during the base period, but fishing patterns for some fisheries have changed substantially since then and the University of Washington Accelerated stock is no longer tagged. One example of a change in the fishing pattern is for the SEAK troll fishery where the catch during the winter season has increased, the spring fishery has been largely curtailed, and the summer season has become markedly shorter. Because stock complexes are dynamic throughout the year, stock specific impacts of the SEAK fishery have likely changed over time. To incorporate changes in stock composition and to include stocks without base period data, the CTC examined alternative derivations of fishery indices (CTC 1996).

The CTC determined that a useful fishery index should reflect both changes in harvest rates and stock distribution. Three general, desirable characteristics were identified:

1. the index should measure changes in fishery harvest rates if the distribution of stocks is unchanged from the base period;
2. the index should have an expected value of 1.0 for random variation around the base period fishery harvest rate, cohort size, and stock distributions; and
3. the index should weight changes in stock distribution by abundance.

After exploring several alternatives, the CTC concluded that the best estimate for a fishery index would consist of the product of a fishery harvest rate index and an index of stock abundance

weighted by average distribution (i.e., the proportion of a cohort vulnerable to the fishery). To that effect a report by the CTC (2009a) stated that for all AABM fisheries the stratified proportional harvest rate index (SPFI) was the most accurate and precise in estimating the harvest rate occurring in a fishery. This assessment supported the application of the SPFI adjusted for untagged stocks as presented by Alaska Department of Fish and Game (ADF&G), and is also developed for WCVI and NBC AABM fisheries.

For computation of the SPFI, the CWT harvest rate ($h_{t,CY}$) must initially be set to an arbitrary value between 0 and 1. Then, the distribution parameter ($d_{t,s,a}$) is calculated (Equation 2.9), and the result is substituted into Equation 2.10 below to recursively recalculate $h_{t,CY}$ and subsequently $d_{t,s,a}$. The largest stock-age distribution parameter in a stratum is then set to 1 to create a unique solution. See Table 2-4 for notation description.

$$d_{t,s,a} = \sum_{CY} r_{t,CY,s,a} \Big/ \sum_{CY} \left(h_{t,CY} * n_{CY,s,a}\right)$$

Equation 2.9

$$h_{t,CY} = \sum_{s}\sum_{a} r_{t,CY,s,a} \Big/ \sum_{s}\sum_{a} \left(d_{t,s,a} * n_{CY,s,a}\right)$$

Equation 2.10

The resulting unique solution is inserted into the following equations to compute the yearly harvest rates for each strata and the overall fishery:

$$H_{t,CY} = \left[\left(\frac{\sum_{s}\sum_{a} c_{t,CY,s,a}}{\sum_{s}\sum_{a} r_{t,CY,s,a}}\right) * \left(C_{t,CY} - A_{t,CY}\right)\right] \Big/ \left[\left(C_{t,CY} - A_{t,CY}\right)/h_{t,CY}\right]$$

Equation 2.11

$$H_{CY} = \sum_{t}\left[\left(\frac{\sum_{s}\sum_{a} c_{t,CY,s,a}}{\sum_{s}\sum_{a} r_{t,CY,s,a}}\right) * \left(C_{t,CY} - A_{t,CY}\right)\right] \Big/ \sum_{t}\left[\left(C_{t,CY} - A_{t,CY}\right)/h_{t,CY}\right]$$

Equation 2.12

$$S_{t,CY} = H_{t,CY} \Big/ \sum_{CY=1979}^{1982} H_{t,CY}$$

Equation 2.13

$$S_{,CY} = H_{,CY} \Big/ \sum_{CY=1979}^{1982} H_{,CY}$$

Equation 2.14

Table 2-4. Parameter descriptions for equations used for the SPFI.

Parameter	Description
$A_{t,CY}$ =	Alaska hatchery origin catch by strata t, year CY
$c_{t,CY,s,a}$ =	adult equivalent CWT catch by strata t, year CY, stock s and age a
$C_{t,CY}$ =	catch by strata t, year CY
$d_{t,s,a}$ =	distribution parameter by strata t, stock s and age a
$h_{t,CY}$ =	CWT harvest rate by strata t, year CY
H_{CY} =	harvest rate by year CY
$H_{t,CY}$ =	harvest rate by strata t, year CY
$n_{CY,s,a}$ =	CWT cohort size by year CY, stock s and age a
$r_{t,CY,s,a}$ =	CWT recoveries by strata t, year CY, stock s and age a
S_{CY} =	SPFI by year CY
$S_{t,CY}$ =	SPFI by strata t, year CY

2.5 ISBM Indices

The CTC (1996) proposed a non-ceiling fishery index as a measure of the pass-through provision in the 1985 PST. This index compares an 'expected' AEQ mortality (assuming base period exploitation rates and current stock abundance) with the observed AEQ mortality on a stock within a calendar year, over all non-AABM fisheries of a party (Table 2-5). Index values less than 1.0 indicate that the exploitation rates have decreased relative to the base period. Paragraph 8(d), Chapter 3 of the 2008 PSC Agreement directs the CTC to use these ISBM indices to measure the performance of ISBM fisheries:

"(d) unless otherwise recommended by the CTC and approved by the Commission, the non-ceiling index defined in CTC (2005) where data are available for the required time periods, the average total annual adult equivalent mortality rate that occurred in 1991 to 1996, or an alternative metric recommended by the CTC and approved by the Commission will be used to monitor performance of ISBM fisheries relative to the obligations set forth in this paragraph;"

Table 2-5. Fisheries included in the ISBM index by nation.

Fisheries Included in ISBM Index	
United States	Canada
Washington/Oregon Ocean Troll	Central BC Troll
Puget Sound Northern Net	Strait of Georgia Troll
Puget Sound Southern Net	North BC Net
Washington Coastal Net	Central BC Net
Freshwater Terminal Net	West Coast Vancouver Island Net
Washington/Oregon Ocean Sport	Strait of Juan de Fuca Net
Puget Sound Northern Sport	Johnstone Strait Net
Puget Sound Southern Sport	Fraser Net
Freshwater Terminal Sport	Freshwater BC Net
	Strait of Georgia Sport
	Strait of Juan de Fuca Sport
	Freshwater BC Sport

The formula proposed by the CTC in 1991 and referred to in CTC (1996) for a stock/country combination is:

$$ISBMIdx_{CY} = \frac{\sum_{f=\{F\}} \sum_{a=Minage}^{Maxage} \left(TotMorts_{CY,f,a} * AEQ_{BY=CY-a,a,f} \right)}{\sum_{f=\{F\}} \sum_{a=Minage}^{Maxage} \left(BPISBMER_{f,a} * Cohort_{BY=CY-a,a} \right)}$$

Equation 2.15

Where:

$$BPISBMER_{f,a} = \frac{\sum_{BPER=79}^{82} \frac{\left(TotMorts_{BPER,f,a} * AEQ_{BY=BPER-a,a,f} \right)}{Cohort_{BY=BPER-a,a}}}{4}$$

Equation 2.16

Direct application of the PSC Chinook salmon model alone or CWT data alone was not possible in the computation of all ISBM indices because some fisheries required a finer resolution than the CTC model currently provides or because some terminal fisheries target only marked hatchery fish which makes the estimated CWT-based exploitation rate non-representative of the untagged stocks. In those instances the following methods were used:

For terminal fisheries with marked harvest rates that were not representative of the untagged stocks of interest, external estimates were used instead of model estimates. For preseason estimates, the Fisheries Resource Assessment Model (FRAM) and the Columbia River Harvest Model were used to generate external estimates for Puget Sound net and sport, and Columbia River net and sport fisheries, respectively. For postseason CWT-based estimates, base period exploitation rates for the model stock associated with the wild stock were used if the indicator stock did not have base period recoveries.

Many ISBM fisheries or stock/fishery combinations have no preseason predictions of harvest rates and some have no abundance forecasts. In those cases, the previous year's harvest rates were assumed.

2.6 Assumptions of the CWT ERA Analyses

Assumptions used in the cohort analysis and other procedures used in the ERA are summarized below. Detailed discussions of assumptions and parameter values have been reported previously (CTC 1988). The analysis is necessary to calculate the fishery indices for the AABM fisheries and the non-ceiling index for the ISBM fisheries. The primary assumptions of the cohort analysis are:

1. CWT recovery data are obtained in a consistent manner from year to year or can be adjusted to make them comparable. Many of the analyses rely upon indices that are computed as the ratio of a statistic in a particular year to the value associated with a base period. Use of ratios may reduce or eliminate the effect of data biases that are consistent from year to year.
2. For ocean age 2 and older fish, natural mortality varies by age but is constant across

years. Natural mortality rates applied by age are: age 2, 40%; age 3, 30%; age 4, 20%; and age 5 and older 10% (i.e., after fishing mortality and maturation of the age 4 cohort, 10% of the remaining immature fish die due to natural sources before becoming age 5 fish and before the commencement of fishing the next year).

3. All stocks within a fishery have the same size distribution for each age and the size distribution at age is constant among years.
4. The spatial and temporal catch distribution of sublegal-size fish of a given age from a stock is the same as legal-size fish of a given age of that stock.
5. Incidental mortality rates per encounter are constant between years. The rates vary by fish size (legal or sublegal) and fishery and are those published by the CTC (1997) for troll and sport fisheries. The rates used in CLB 1209 are listed in Appendix G.
6. The procedures for estimating the mortality of CWT fish of legal size during periods of Chinook salmon non-retention (CNR) assume that the stock distribution in any year remains unchanged from the period of legal catch retention in the same year. However, gear and/or area restrictions during CNR fisheries are believed to reduce the number of encounters of legal-size fish. To account for this, the number of legal encounters during the CNR fishery was adjusted by a selectivity factor. A factor of 0.34 was used for the WCVI and Strait of Georgia (GS) troll fisheries. This value was the average selectivity factor calculated from 3 years of observer data in the Alaska troll fishery. A factor of 0.20 was used in the North Central British Columbia (NCBC) troll fishery. This factor corresponds to the proportion of fishing areas that remain open during non-retention periods. A selectivity factor was not required for the SEAK troll fishery since an independent estimate of legal and sublegal encounters has been provided annually.
7. Maturation rates for brood years in which all ages have not matured (incomplete broods) are equal to the average of completed brood years. Maturation rates are stock specific.
8. Recoveries of age 4 (age 5 for spring stocks) and older Chinook salmon in ocean net fisheries are assumed to be mature fish (ocean terminal catches).

In addition, when using the fishery indices as a measure of the change in fishery harvest rates between years, the temporal and spatial distribution of stocks in and among fisheries and years is assumed to be stable.

For AABM fisheries, the fishery indices are presented for both reported catch (same as landed catch) and total mortality; only total mortality indices are presented for the ISBM fisheries. The difference between reported catch and total mortality is incidental mortality, which includes the mortality of legal-size fish in CNR fisheries and the mortality of sublegal-size fish in both retention and CNR fisheries. Management strategies have changed considerably for fisheries of interest to the PSC since 1985. Regulatory changes have included size limit changes, extended periods of CNR in troll fisheries, and mandatory release of Chinook salmon caught in some net fisheries. Estimates of incidental mortality are crucial for assessment of total fishery impacts, yet they cannot be determined directly from CWT recovery data. There are four categories of incidental mortality that are estimated in the Chinook model and the CWT cohort analysis. Legal and sublegal fishery specific mortality rates are applied to the following types of Chinook salmon encounters:

1. Shakers: Chinook salmon below the legal size limit that are encountered, brought to the boat, and released during a Chinook salmon retention fishery.
2. Sublegal CNR: Chinook salmon below the legal size limit that are encountered, brought to the boat, and released during a Chinook salmon non-retention fishery. The mortality rate per encounter applied to sublegal CNR is the same applied to shakers.
3. Legal CNR: Chinook salmon above the legal size limit that are encountered, brought to the boat, and released during a Chinook salmon non-retention fishery.
4. Drop-off: Chinook salmon above or below the legal size limit that are encountered, but are lost from the gear before they reach the boat during either retention or non-retention fisheries. Drop-off mortality is assumed the same for legal and sublegal fish, but can vary by gear type.

There are several methods used to estimate the number of CNR mortalities in the model and the CWT cohort analysis. The 'season length' method uses the relative length of the Chinook salmon retention and non-retention periods. This is usually expressed in days or boat-days. In a related method, direct estimates of CNR encounters provided by the agencies are related to the size of the landed catch. The CWT cohort analysis can also use a method based on catchability coefficients where no associated Chinook salmon retention period exists for the fishery. The 'season length' method used in the exploitation rate assessment was described in CTC (1988). The Chinook model also can also use a method, known as the 'RT' method, based on the difference between the base period and the current year exploitation rates, and current cohort sizes. In both the season length and RT methods, the stock composition of the legal CNR encounters is assumed to be the same as the stock composition of the legal catch. The stock composition of the shakers and sublegal CNR encounters is estimated using the non-vulnerable portions of the cohorts for stocks that contribute to the landed catch. The procedures used to estimate incidental mortality in the Chinook model have been described by the CTC AWG (1991) and CTC (2004).

For some fisheries or years, CWT recoveries are either lacking or cannot be used in certain analyses of this exploitation rate assessment. In some of these situations the model can be used for ER assessment.

2.7 Results of ERA (Appendix C, D and E)

The purpose of the Exploitation Rate Analysis (ERA) is to estimate postseason how stocks and fisheries perform across the various AABM and ISBM fisheries. To this effect, we report numerous statistics by region and stock that are assembled in Appendices C through E. Appendix C summarizes tag recovery distributions for each stock by year, region (specifically AABM and ISBM fisheries) and escapement. Appendix D summarizes survival indices by stock based on CWTs and the PSC Chinook model. Summaries of how these two types of indices relate are reported with a correlation coefficient in each of these graphs. Finally Appendix E summarizes the exploitation rate for complete broods for pre-terminal and terminal fisheries by stock.

3 MODEL CALIBRATION AND OUTPUT

3.1 Model Calibration

This section describes the calibration data and procedures. For reference, a list of stocks and fisheries in the model is provided in Appendix A. Estimation of the model base period parameters is described in the draft model documentation (CTC AWG 1991). For 2012, the model used was the same as used during the Pacific Salmon Treaty negotiations (CLB 9812), with the actual catches, escapements, and other data through 2011 added. In addition, CTC-accepted escapement goals were used where available and the form of the Ricker production function was adjusted for those stocks with newly accepted goals (e.g. Harrison River fall Chinook salmon).

3.1.1 Calibration Data

The first step in the annual calibration process is to gather new or revised data to update the model input files. For example, the file containing run size data is updated as preseason forecasts and postseason estimates become available since model predictions are sensitive to preseason forecasts and postseason estimates of terminal runs. Months in which forecasts are made for each stock, and the month the final return estimate becomes available, are presented in Table 3-1

The model is recalibrated annually to incorporate observed data from the previous year and available abundance forecasts for next year. In addition, recalibration may also occur when significant changes in one or more of the following model input files are made:

BSE (base). This file contains basic information describing the structure of the model, for example the number and names of stocks and fisheries, age classes, the base period, identification of terminal fisheries, and stock production parameters. This file may be modified annually to incorporate productivity parameters that correspond to new CTC agreed escapement goals.

CEI (ceiling). This file contains historical catch data for the 19 fisheries that are modeled as ceiling or catch quota fisheries (as opposed to fisheries modeled solely through control of exploitation rates) through the most recent fishing season.

CNR (Chinook salmon non-retention). Data used by the model to estimate mortalities during CNR periods are read from the CNR file. The data in the CNR file depends on which method is used to calculate CNR mortality. It may include direct estimates of encounters during the CNR period or indicators of fishing effort in the CNR period relative to the retention period.

Table 3-1. Months when agencies are able to provide final return estimates for the previous year and preseason forecasts of abundance for the next fishing year.

Model Stock	Month Final Return Estimate Available	Month(s) Forecast Available
Alaska South SE	January	None
North/Central BC	November	None
WCVI Natural	January	February
WCVI Hatchery	January	February
Upper Strait of Georgia	January	None
Lower Strait of Georgia Hatchery	December	None
Lower Strait of Georgia Natural	December	None
Fraser Early	January	None
Fraser Late	February	February
Nooksack Spring	June	February
Nooksack Fall (Samish)	June	February
Snohomish Wild	June	February
Skagit Wild	June	February
Puget Sound Natural Fingerling	June	February
Stillaguamish Wild	June	February
Puget Sound Hatchery Fingerling	June	February
Puget Sound Hatchery Yearling	June	February
Washington Coastal Wild	June	March[1]
Washington Coastal Hatchery	June	March[1]
Cowlitz Spring Hatchery	June	December
Willamette River Hatchery	June	December
Columbia River Summer	September	February
Fall Cowlitz Hatchery	April	February, April[2]
Spring Creek Hatchery	April	February, April
Lower Bonneville Hatchery	April	February, April
Upriver Brights	April	February, April
Snake River Wild Fall	April	April
Mid-Columbia River Bright	April	February, April
Lewis River Wild	April	February, April
Oregon Coast	February	February

[1] Normally forecasts are not available for the model calibration, but these were available in 2012.
[2] A preliminary ocean escapement forecast is released in February. An updated ocean escapement forecast reflecting the ocean fishery option adopted by PFMC is released in April.

ENH (enhancement file). For 13 hatchery stocks and one natural stock (Lower Georgia Strait Naturals) with supplementation, this file contains productivity parameters as well as the differences (positive or negative) in annual smolt production relative to the Base Period. Additional discussion of the productivity parameters may be found in the draft model documentation (CTC AWG 1991).

FCS (forecast). Agency supplied annual estimates of terminal run sizes or escapements as well as preseason forecasts are contained in the FCS file. Age-specific information is used for those stocks and years with age data (Table 3-2).

FP (fishery policy). This file contains scalars specific to year, fishery, stock, and age that are applied to base period fishery exploitation rates. The FPs are used to scale annujal fishery exploitation rates relative to the model base period and can be used for a variety of purposes. For example, for the ocean areas of the Washington and Oregon North of Cape Falcon (WA/OR) troll fishery, the FPs are used to model differential impacts on Columbia River and Puget Sound stocks as the proportion of the catch occurring in the Strait of Juan de Fuca varies. The source of the FPs is generally the reported catch fishery index computed from CWT data in the annual exploitation rate analysis or the ratios of harvest rates computed from terminal area run reconstructions.

IDL (interdam loss). The IDL file contains stock-specific conversion factors for the Columbia River Summer, Columbia Upriver Bright, Spring Creek Tule, and Snake River Fall stocks provided each year by Columbia River fishery managers. The factors represent the fraction of the stock that can be accounted for after main stem dam passage in the Columbia River; losses can be attributed to direct mortality at the various dams, mortality in the reservoirs between dams, fall-backs, tailrace spawning, and other factors. The interdam loss factor is equal to one minus the conversion factor.

IM (changes in incidental mortality rates). The IM file contains the incidental mortality rates by fishery for legal and sublegal fish that differ from those used in the base period due to alterations in gear, regulations, or fishery conduct.

MAT (maturity and adult equivalent factors). The MAT file has annual estimates of maturation rates and adult equivalent factors for 11 stocks (AKS, BON, CWF, FRL, GSH, LRW, ORC, RBH, RBT, SPR, URB, and WSH). These estimates replace the base period rates in the BSE file. The annual estimates are obtained from the annual exploitation rate analysis. Long-term average values are used for years beyond the last year for which estimates are available (due to incomplete broods and the one year lag for completion of the annual exploitation rate analysis).

PNV (proportion non-vulnerable). A PNV file is created for each fishery for which a size limit change has occurred since the model base period. Each file contains age-specific estimates of the proportion of fish not vulnerable to the fishing gear or smaller in length than the minimum size limit. The PNVs were estimated from empirical size distribution data; in some instances independent surveys of encounter rates were used to adjust the PNV for age 2 fish to account for the proportion of the cohort that was not vulnerable to the fishing gear.

STK (stock). This file contains the stock and age-specific starting (base period) cohort sizes, the base period exploitation rates on the vulnerable cohort for each model fishery, maturation schedules, and adult equivalent factors. This file is updated if new stocks or

fisheries are added, new CWT codes are used to represent distribution patterns of existing model stocks, or a re-estimation of base period data occurs. Modification of this file will result in a model different from that used in the negotiations (CLB 9812).

The calibration is controlled through a file designated with an OP7 extension.

Table 3-2. Methods used to forecast the abundance of stocks in the PSC Chinook Model. Externally provided forecast type codes are S = sibling; R = return rate; C = model internally estimated projection.

	Forecast Characteristics			
Model Stock	Forecast Type	Preseason Age-specific	Postseason Age-specific	Comments
Alaska South SE	C	-	Yes	Calibrated to escapement
North/Central BC	C	-	No	Calibrated to terminal run
WCVI Hatchery + Natural (RBH and RBT model stocks)	S	Yes	Yes	Robertson Creek Hatchery forecasts plus expansion for other WCVI stocks based on ratio of terminal run sizes
Upper Strait of Georgia	C	-	Partial	Calibrated to escapement
Lower Strait of Georgia Hatchery	C	-	Yes	Calibrated to escapement to GSH hatchery systems and Squamish River
Lower Strait of Georgia Natural	C	-	Yes	Calibrated to escapement to Cowichan and Nanaimo Rivers
Fraser Early	C	-	No	Calibrated to terminal run
Fraser Late	S	Yes	Yes	Combined forecasts of escapements for Harrison River and Chilliwack Hatchery
Nooksack Spring	R	No	No	Calibrated to escapement
Nooksack Fall (Samish)	R	No	No	Recent year average return rate
Snohomish Wild	R	No	No	Recruits per Spawner
Skagit Wild	R	Yes	Yes	Average cohort return rate
Puget Sound Natural Fingerling	R	No	No	Calibrated to terminal run
Stillaguamish Wild	R	No	No	Recruits per Spawner
Puget Sound Hatchery Fingerling + Yearling	R	No	No	Age-specific forecasts not available for all components
Washington Coastal Wild	R	No	No	Average return rate
Washington Coastal Hatchery	R	No	No	Average return rate
Cowlitz Spring Hatchery	S	Yes	Yes	Prediction is to mouth of tributary streams
Willamette River Hatchery	S	Yes	Yes	Prediction is to mouth of Willamette River
Columbia River Summer	S	No	No	Run reconstruction used to estimate Columbia River mouth return
Spring Creek Hatchery	S	Yes	Yes	Run reconstruction used to estimate Columbia River mouth return
Lower Bonneville Hatchery	S	Yes	Yes	Run reconstruction used to estimate Columbia River mouth return
Upriver Brights	S	Yes	Yes	Run reconstruction used to estimate Columbia River mouth return
Lyons Ferry (Snake River Wild Fall)	R	No	No	Calibrated to escapement to Lower Granite.
Mid-Columbia River Bright	S	Yes	Yes	Run reconstruction used to estimate Columbia River mouth return
Lewis River Wild	S	Yes	Yes	Run reconstruction used to estimate Columbia River mouth return
Oregon Coast	S	Yes	Yes	Weighted average age composition from four index rivers

3.1.2 Calibration Procedures

The objective of the calibration is to estimate stock and brood year specific environmental variant (EV) scalars. The calibration uses an iterative algorithm to estimate the EV scalars for each brood year and model stock to account for annual variability in natural mortality in the initial year of ocean residence. EV scalars are used to adjust age-1 abuncances that are estimated for each stock and brood year from escapements in combination with the base period spawner-recruit functions. Fishing impacts and natural mortalities are then applied through model processes. EVs also adjust for biases resulting from errors in the data or assumptions used to estimate the base period parameters for the spawner-recruit function.

EVs are estimated through the following steps for stocks calibrated to age-specific terminal run sizes:

1. Predicted terminal runs are first computed for each year using the input files discussed above and the base period stock-recruitment function parameters (i.e.,EV stock productivity scalars set equal to 1).
2. The ratio (SC_{BY}) of the observed terminal run and the model predicted terminal run from the previous step is computed for each brood year. For example, if the estimated and model predicted terminal runs for the 1979 brood were 900 and 1,500 age 3 fish in 1982, 4,000 and 4,500 age 4 fish in 1983, and 1,000 and 1,500 age 5 fish in 1983, the ratio would be computed as:

$$SC_{BY} = \frac{\sum_{a=Minage}^{Maxage} (Observed Terminal Run)_a}{\sum_{a=Minage}^{Maxage} (Model Predicted Terminal Run)_a}$$

Equation 3.1

$$SC_{BY} = \frac{900 + 4000 + 1000}{1500 + 4500 + 1500}$$

Equation 3.2

In the absence of age-specific estimates of the terminal run, the components are computed by multiplying the total terminal run by the model predictions of age composition.

3. The EV for iteration n and brood year BY is computed as:

$$EV_{n,BY} = EV_{n-1,BY} * SC_{BY} \qquad \text{Equation 3.3}$$

4. Steps 1–3 are repeated iteratively until the absolute change in the EVs for all stocks is less than a predetermined tolerance level (0.05). This tolerance level could be changed if required depending on the coarseness needed for resolution:

$$\left| \frac{EV_{n,BY} - EV_{n-1,BY}}{EV_{n-1}} \right| < 0.05 \qquad \text{Equation 3.4}$$

Several options for the calibration are provided in the OP7 control file. The options include the ability to control the brood years for which the EVs are estimated in each iteration and also the type of convergence criteria. For the 2012 calibration, in each iteration EVs were estimated for all brood years. Convergence was defined to occur when the absolute value of the difference in EVs between successive iterations did not exceed 0.05.

Stock-specific calibration options are specified in the FCS file and discussed below:

Minimum Number of Age Classes. Data for all age classes will not be available when the EVs are estimated for recent broods. Since considerable uncertainty may exist in a single data point, application of the calibration algorithm can be restricted to cases in which a specific minimum number of age classes are present.

Minimum Age. Considerable uncertainty often exists in the estimates of terminal runs or escapements for younger age classes, particularly age 2. The minimum age class to include in the calibration algorithm is specified in the FCS file.

Estimation of Age Composition. Age-specific estimates of the terminal run or escapement may not be available. An option is provided to estimate the age composition using base period maturation and exploitation rates.

The forecasts provided by the management agencies typically represent terminal runs or escapements without adjustments for changes in ocean fisheries. Therefore expansions of the forecasts to total cohort size are made using average exploitation rates for the period of years in the forecast database.

The 2012 calibration was completed in two stages to facilitate computation of the average exploitation rates and incorporation of the agency forecasts. The Stage 1 calibration provided initial estimates of exploitation rate scalars for fishing years 1979 through 2010 using updated catch and escapement data through 2010. Average exploitation rate scalars ($\overline{FP}$) were then computed and used as input values for 2012 fisheries in the Stage 2 calibration, except that the forecasts for the WCVI and Fraser Late (FRL) stocks already accounted for changes in the ocean fisheries.

The $\overline{FP}$ for each model fishery were obtained from the Stage 1 calibration using the following formula:

$$\overline{FP}_{a,s,CY,f} = \frac{\sum_{CY=CY_{start}}^{CY_{end}} RT_{CY} * FP_{s,a,CY,f}}{(CY_{end} - CY_{start})}$$

Equation 3.5

The range of years used to compute the average FP varied between stocks and was fishery and age-specific. The input files used in the Stage 2 calibration were identical to those used in Stage 1 with two exceptions: (*i*) the average exploitation rate scale factors for each fishery were inserted into the FP file for 2012; and (*ii*) the Stage 1 EVs were used as starting values for the Stage 2 calibration.

To determine the acceptability of a calibration by the CTC (i.e., whether an annual calibration is deemed final by the CTC), several results are examined:

1. accuracy of the reconstructed catches in the fisheries (these values will consistently differ from the actual catches if the calibration is not able to exactly recreate the actual catches in the years 1979 through 1984, the model years used prior to implementation of the ceiling algorithm),
2. accuracy of model predicted terminal runs or escapements relative to the data used for calibration of each stock,
3. comparison of model predicted age structure in terminal runs or escapements with the data used for calibration (consistent biases in age structure are addressed by changing maturation rates),
4. patterns in the EVs compared with marine survival patterns generated by the annual exploitation rate analysis,
5. comparison of CWT-based and model estimates of fishery harvest rate indices,
6. comparison of model estimates of mortality distributions for individual stocks to those generated from the annual CWT-based exploitation rate analysis, and
7. comparison of model estimated AIs to the AIs previously estimated by model CLB 9812.

Calibration usually involves an iterative process until a judgment is made by the CTC that an acceptable fit to all the data was achieved. This decision usually involves an inspection and trial-and-error process. The determination of whether or not further calibrations are necessary is based principally on the significance of deviations from observed or estimated values for stocks and fisheries most relevant to the issues to be evaluated and on the time constraints established for completion of the calibration.

3.2 Model Calibration Evaluation

Previous reports included evaluations of model performance for the most current model year, including comparisons of model estimates of catch and escapement/terminal run sizes to actual estimates of catch and escapement/terminal run size. This year, the model catches and stock escapements or terminal run sizes estimated by CLB 1209 were evaluated along with other aspects of the calibration. The calibration was distributed to the CTC membership for review and subsequent approved. Correlations between model and CWT fishery indices were made as part of the normal calibration checking process, however the results are not presented in this report.

Fishery mortality indices generated by CLB 1209 can be compared to the CWT-based exploitation rate analysis. Model and CWT-based fishery mortality indices use the same equation, but the former are derived from model estimates of catch for all model stocks instead of CWT recovery data from specific exploitation rate indicator stocks. The CWT fishery mortality indices are considered the most accurate. Fishery indices based on reported catch and total mortality are constructed using two methods. The first method is a ratio of means (ROM) and the second is the stratified proportional fishery index (SPFI; CTC 2009a). In general, the model results are closely associated with the CWT-based indices of annual fishery exploitation rates.

The SEAK fishery mortality index from the model closely follows the trend of the CWT derived estimate from 1979 through 1989 for both landed catch and total mortality (Figure 3-1 and Figure 3-2). Between 1989 and 2000, the model estimates of both the landed catch and total mortality indices are less than the CWT-derived estimate for most years. Contrarily, since 2001, the model estimates have typically been higher. Since 1990, the model estimates also show less variability compared to the CWT-derived indices.

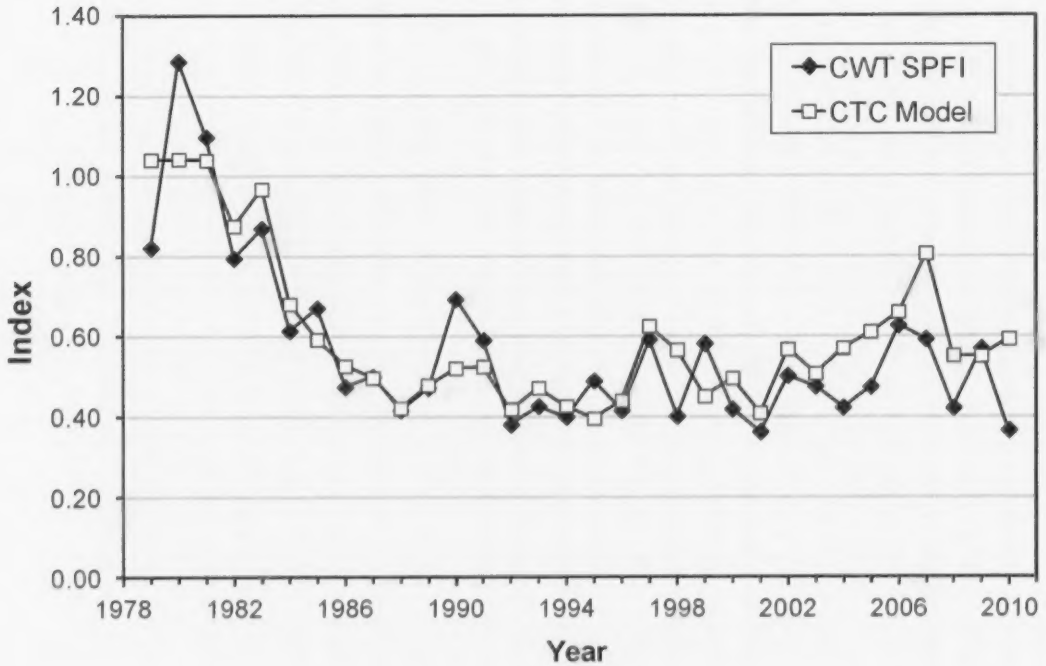

Figure 3-1. Estimated CWT based SPFI (through 2010) and model landed catch fishery indices (through 2010) for the SEAK troll fishery

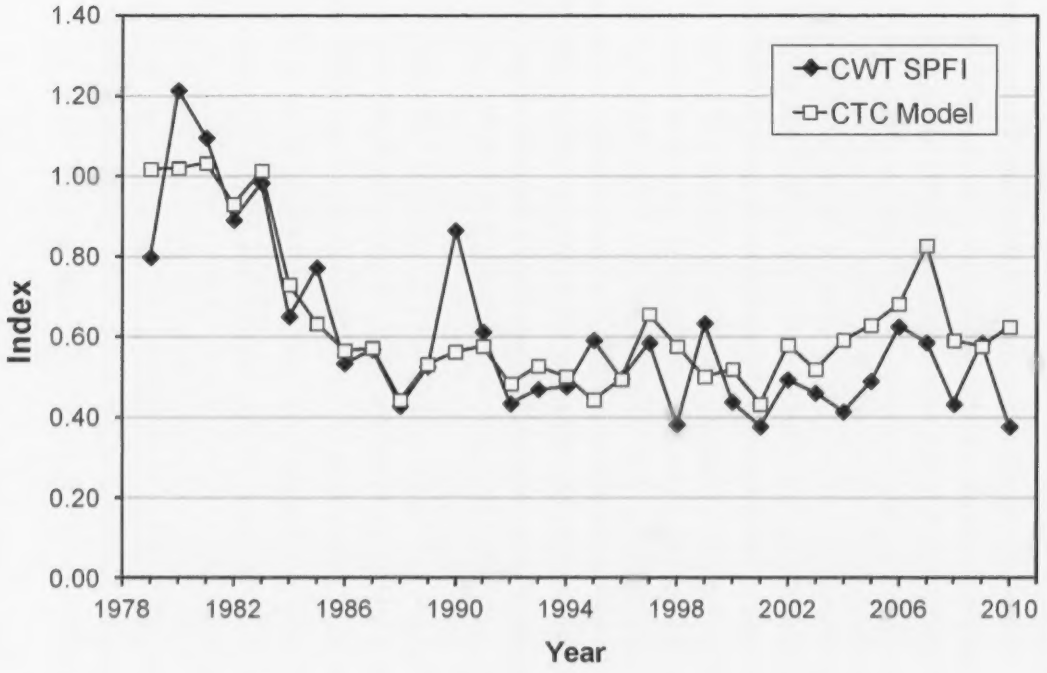

Figure 3-2. Estimated CWT based SPFI (through 2010) and model total mortality fishery indices (through 2010) for the SEAK troll fishery.

3.2.1 SPFI developed for NBC and WCVI AABM Fisheries

Based on the results that came out of the Harvest Rate Index Analysis in 2009 (CTC 2009a), a recommendation was made to use the SPFI estimator for the fishery index in all AABM fisheries. As a result, the CTC created the SPFI for WCVI and NBC fisheries and compared them to the model and CWT based ROM estimator of the fishery index for each of the fisheries analyzed (Figure 3-3 through Figure 3-6). It should be noted that an assessment of how the SPFI affects results in the calibration procedures was originally intended to be included in this report. This analysis has been deferred until a new base calibration is completed.

The model-derived fishery mortality indices for NBC generally follow the same trend as CWT-derived indices (Figure 3-3 and Figure 3-4Figure 3-4). However, since 1991, the model-based estimates have exceeded the CWT-derived estimates in all but three years for both landed catch and total mortality indices. Since 2001, this difference has been noticeably large.

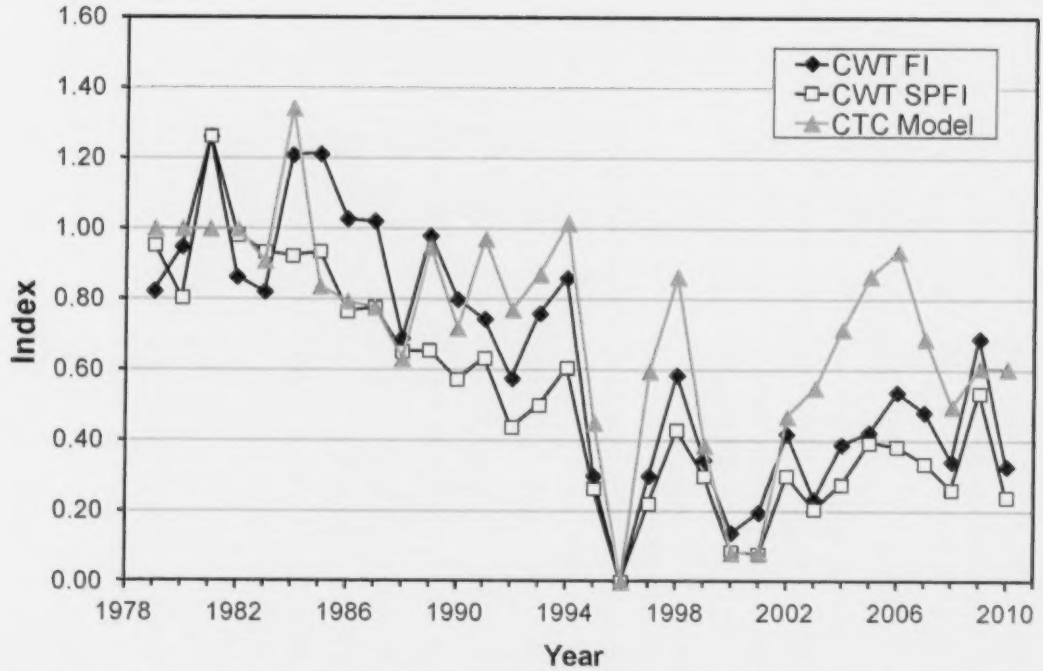

Figure 3-3. Estimated CWT ROM (FI), SPFI (through 2010) and model landed catch fishery indices (through 2010) for the NBC troll fishery.

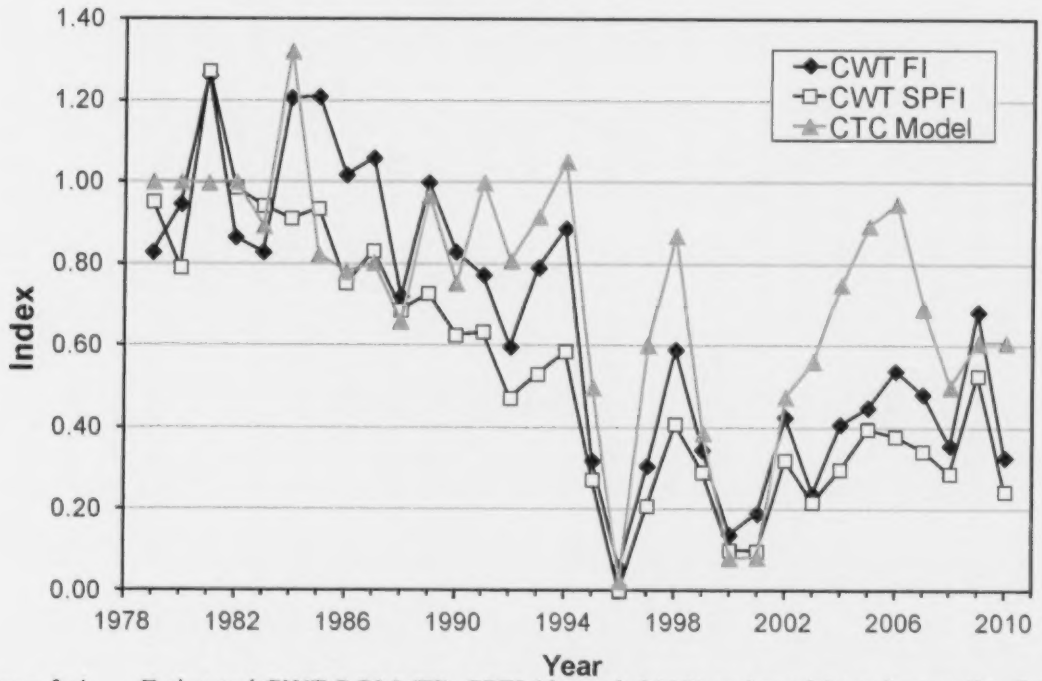

Figure 3-4. Estimated CWT ROM (FI), SPFI (through 2010) and model total mortality fishery indices (through 2010) for the NBC troll fishery.

Since the base period, the model-derived landed catch fishery index estimates and trends for the WCVI troll fishery have been similar to CWT based ROM FI estimates (Figure 3-5 and Figure 3-6). Starting in 2000, model and CWT based ROM estimates have diverged significantly for both landed catch and total mortality, with the CWT indices being consistently higher than model indices. To adjust for this the SPFI was developed that captures temporal and spatial changes in the fishery, and is now reported along with the ROM FI (Figure 3-5 and Figure 3-6).

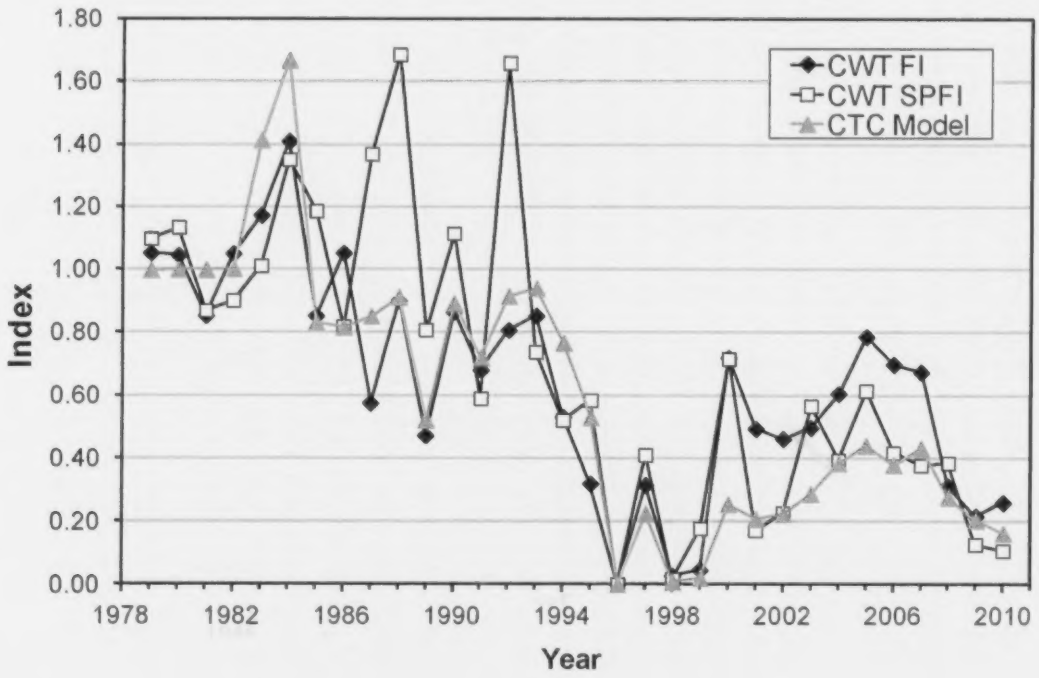

Figure 3-5. Estimated CWT ROM (FI), SPFI (through 2010) and model landed catch fishery indices (through 2010) for the WCVI troll fishery.

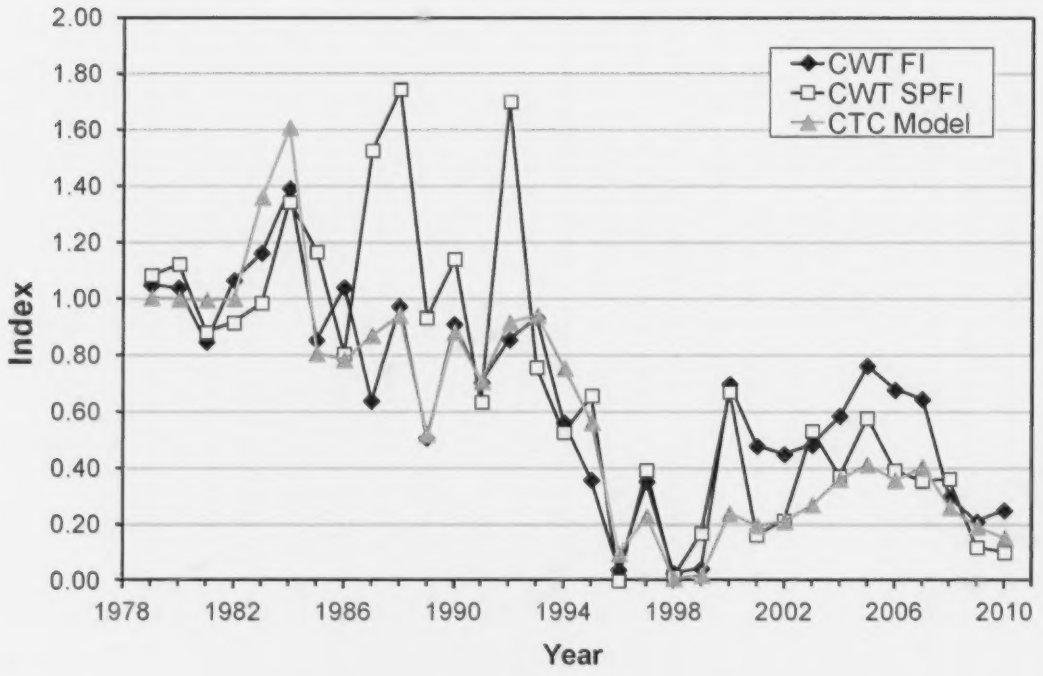

Figure 3-6. Estimated CWT ROM (FI), SPFI (through 2010) and model total mortality fishery indices (through 2010) for the WCVI troll fishery.

3.3 AABM Abundance Indices and Associated Catches

Beginning with the 1999 fishing season, the PST specified that the AABM fisheries are to be managed through the use of the preseason AIs, where specific allowable harvest corresponds to a given AI for each fishery. The preseason AIs that were used to establish harvest management targets are listed in Table 3-3. The 2012 preseason AI for the SEAK troll fishery is 1.52, for the NBC troll fishery it is 1.32, and for the WCVI troll fishery is 0.89. This is the fourth year of the 2008 Agreement that reduced catches and associated harvest rates in Southeast Alaska and West Coast of Vancouver Island AABM fisheries in response to coast-wide conservation concerns. The NBC AABM fishery remained at the same allowable catch and harvest rates as the previous annex. In-season predictors may also be used for in-season adjustments to the preseason AIs for the SEAK troll fishery. However, the in-season AI has not provided a reliable estimate of the postseason AI due to its reliance on the preseason AI in the calculations and has not been used for in-season management action since 2001.

The postseason AI is a more accurate estimate of the abundance index for the AABM fisheries, and is used to compute a final allowable catch for each fishery to evaluate overage or underage of the landed catch relative to the harvest rate objective. Postseason AIs for 1999-2011 are also listed in Table 3-3.

Table 3-3 Abundance indices (AI) for 1999 to 2012 for the SEAK, NBC, and WCVI troll fisheries (from CLB 1209).

	SEAK		NBC		WCVI	
Year	Preseason	Postseason	Preseason	Postseason	Preseason	Postseason
1999	1.15	1.12	1.12	0.97	0.60	0.50
2000	1.14	1.10	1.00	0.95	0.54	0.47
2001	1.14	1.29	1.02	1.22	0.66	0.68
2002	1.74	1.82	1.45	1.63	0.95	0.92
2003	1.79	2.17	1.48	1.90	0.85	1.10
2004	1.88	2.06	1.67	1.83	0.90	0.98
2005	2.05	1.90	1.69	1.65	0.88	0.84
2006	1.69	1.73	1.53	1.50	0.75	0.68
2007	1.60	1.34	1.35	1.10	0.67	0.57
2008	1.07	1.01	0.96	0.93	0.76	0.64
2009	1.33	1.20	1.10	1.07	0.72	0.61
2010	1.35	1.31	1.17	1.23	0.96	0.95
2011	1.69	1.62	1.38	1.41	1.15	0.90
2012	1.52		1.32		0.89	

The 2008 Agreement specifies the allowable catch for various values of the AI for each fishery. Allowable catches for 1999-2008 were from Table 1 in the Chinook Annex to the 1999 PSC Agreement. In the 2008 Agreement, the relationship between the AI and the allowable catch changed for SEAK and WCVI; thus the allowable catches since 2009 were derived from Table 1 of the Chinook Annex to the 2008 Agreement. The allowable treaty catch by fishery and year based on pre- and postseason AIs and the observed treaty catches are given in Table 3-4.

Table 3-4 Observed catches and postseason allowable catches for 1999 to 2010, and preseason allowable catches for 1999 to 2012, for AABM fisheries.

PST Treaty Allowable and Observed Catches									
Year	SEAK (T, N, S) [1]			NBC (T, S)			WCVI (T, S)		
	Pre-season Allowable Catch	Post-season Allowable Catch	Observed Catch	Pre-season Allowable Catch	Post-season Allowable Catch	Observed Catch	Pre-season Allowable Catch	Post-season Allowable Catch	Observed Catch
1999	192,800	184,200	198,842	145,600	126,100	86,726	128,300	107,000	36,413
2000	189,900	178,500	186,493	130,000	123,500	31,900	115,500	86,200	101,438
2001	189,900	250,300	186,919	132,600	158,900	43,500	141,200	145,500	117,670
2002	356,500	371,900	357,133	192,700	237,800	150,137	203,200	196,800	165,036
2003	366,100	439,600	379,519	197,100	277,200	191,657	181,800	268,900	175,821
2004	383,500	418,300	417,019 421,666 [2]	243,600	267,000	241,508	192,500	209,600	216,624
2005	416,400	387,400	391,999	246,600	240,700	243,606	188,200	179,700	202,662
2006	346,800	354,500	362,948	223,200	200,000	215,985	160,400	145,500	146,883
2007	329,400	259,200	329,804	178,000	143,000	144,235	143,300	121,900	139,150
2008	170,000	152,900	173,382	124,800	120,900	95,647	162,600	136,900	145,726
2009[3]	218,800	176,000	230,647	143,000	139,100	109,470	107,800	91,300	124,617
2010	221,800	215,800	231,591	152,100	160,400	136,613	143,700	142,300	139,047
2011	294,800	283,300	290,715	182,400	186,800	122,660	196,800	134,800	204,232
2012	266,800			173,600			133,300		

[1] Nomenclature is T for troll, N for net, and S for sport.
[2] The lower value resulted from subtracting a disputed terminal exclusion catch for the Stikine River in 2004. Catch accounting has since been defined in the Transboundary Agreement.
[3]This is the first catch year in which fisheries operated under the provisions of the 2009 agreement.

3.3.1 Evaluation of changes in pre- vs. postseason AIs

The preseason abundance indices in all three AABM fisheries have exceeded the postseason abundance indices from 2005 through 2011. There are only a couple of exceptions to this pattern -- the SEAK AABM fishery in 2006, and the NBC AABM fishery in 2010 and 2011. This consistent overestimation of the preseason AIs has been recognized for several years and a preliminary investigation into potential causes was initiated in 2010. Further work was done in 2011, but was not conclusive. The analysis was again expanded in 2012 and focused on the data inputs to the PSC Chinook Model.

It was suspected that substantial changes in the abundance of the major stocks contributing to the AABM fisheries could be a likely source of the problems. In order to identify which stocks and ages have been consistent contributors to the change in the overall AABM abundance values, the stock and age specific components of the overall abundance for each year in each fishery have been examined. Stocks contributing most to the AABM catches, only a few in each AABM fishery, were identified and singled out for further investigation.

The main hypothesis directing the investigation was that changes in the abundance of the major stocks from the preseason to postseason calibrations are caused by changes to inputs to the model. Changes to certain types of inputs are a normal part of the postseason calibration procedure and these include inclusion of new data from the preceding year and updates to historical data. Data in some input files, e.g., the BSE and STK files (containing the base period data including age specific survival rates, stock specific Ricker production parameters, stock-age specific cohort sizes, stock-age specific maturation rates, stock-age specific adult equivalent factors, and fishery-stock-age specific exploitation rates) remain constant for all calibrations. Data in one of the other input files, the ENH file (containing stock-specific enhancement data but only for a small number of model stocks), is updated annually but the values change little if at all. Due to lack of change between calibrations, the inputs in these files were not considered in the investigation.

Data in the CEI and CNR files containing the fishery catches and estimates of CNR mortality can and do contribute to changes in the model estimates of abundance from preseason to postseason to some degree. However, these files are not stock-specific and any changes would be spread out across all stocks encountered in each fishery. In addition, the fact that these files operate on a fishery basis as opposed to a stock basis complicates the investigation and interpretation of any effect that changes in these files have on the stock specific abundances. Therefore, although data in these files have an effect, this investigation focused on model inputs that are likely to have a more direct link to changes in the stock-specific abundances. Similar to the CEI and CNR files, the FPA files containing the fishery-stock-age Fishery Policy (FP) exploitation rate scalars can affect the stock specific abundances, and although these files have a stock-age component to them, it is difficult to isolate an effect of FPs alone. In addition, due to the fact that the last year of the ERA lags two years behind the preseason calibration and a year behind the postseason calibration, the FP scalars which are calculated from ERA output for most fisheries (with the exception of data that comes from terminal FP spreadsheets) are based on recent averages for both calibrations; it is therefore unlikely that the FP values would change drastically between the

two calibrations.

Two remaining input files that may influence AIs between pre- and postseason calibrations are the FCS file, which contains the preseason forecasts and postseason estimates of stock specific terminal runs or escapement (depending on the stock), and the MATAEQ file, which contains the stock-age specific estimates of maturation rates and adult equivalence factors for a select group of model stocks. These two files contain data that directly affect the stock-specific abundances and were deemed a suitable place to start an investigation of the changes between the preseason and postseason abundances of the driver stocks.

Changes in the preseason to postseason terminal run data and the change in the age-specific maturation rates have been examined and summarized for the "significant" model stock subset. It appears that changes to the forecast data are contributing to the changes in the preseason to postseason abundance for several of the stocks. The data also suggest that changes to maturation rates for a couple of stocks may contribute to the AI shift. Additional work is needed to determine how much of the preseason to postseason AI shift is due to changes in each of these inputs alone and in combination. Therefore, specific results from this initial screening process (e.g., stocks identified, degree of change in terminal runs, etc.) will not be reported here, but rather in full in the 2013 calibration and exploitation rate report.

Beyond the model input evaluation described above, the AWG has preliminarily investigated the potential of using the historical (2005-2011) relationships between long-term AABM AIs and an overall production index to correct the bias in the preseason and possibly the first postseason AI.

3.3.2 Stock composition of abundances available in AABM fisheries, 1979-2012

The majority of catches in each AABM fishery are often comprised of only a small subset of the 30 model stocks listed in Appendix A. Figure 3-7 through Figure 3-9 shows the relative abundance for each major stock (resulting from CLB 1209). In general, postseason AIs had a peak during the late 1980s (1987-1989) and another in 2003 and 2004.

The major model stocks contributing to the SEAK AIs are: Columbia River Upriver and Mid-Columbia Bright (URB-MCB), WCVI Natural and Hatchery, Oregon Coastal, North/Central BC, and Washington Coast Hatchery and Natural (Figure 3-7). The "other" category is mainly Fraser Early, Columbia River Summers, and Upper Georgia Strait.

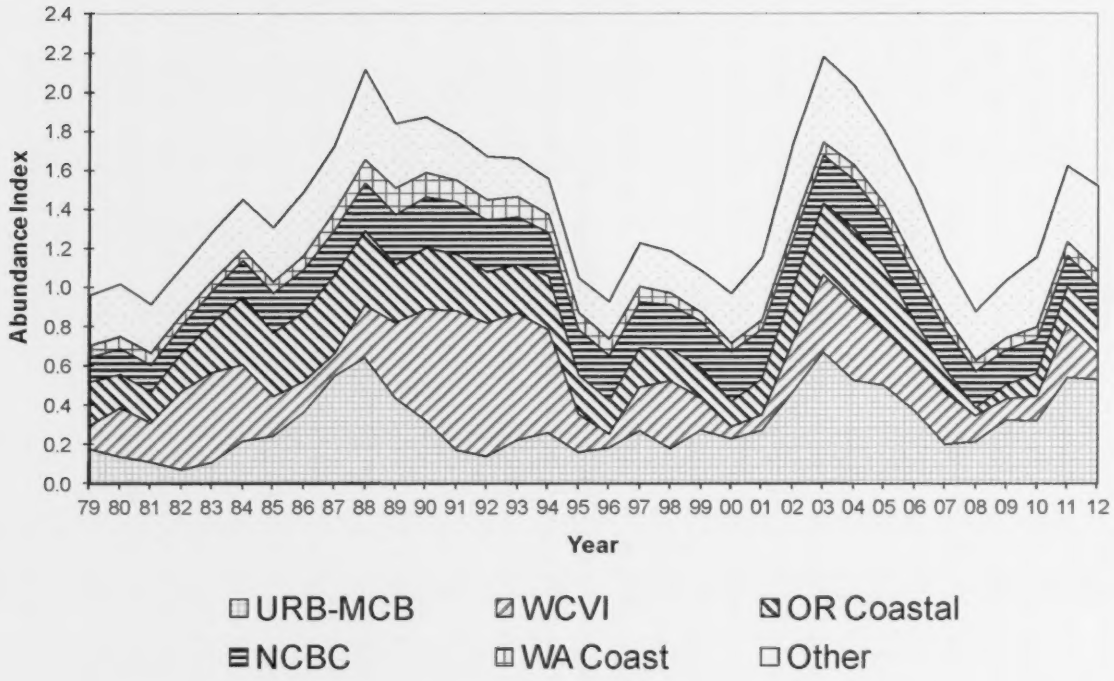

Figure 3-7. Stock composition of the annual abundance indices for the SEAK troll fishery from CLB 1209.

The major model stock groups contributing to the NBC AABM fishery AIs are: Oregon Coastal, URB-MCB, WCVI Natural and Hatchery, North/Central BC, Washington Coastal Wild and Hatchery (Figure 3-8). The "other" category consists primarily of Fraser Early, Willamette Springs, and Upper Georgia Strait stocks.

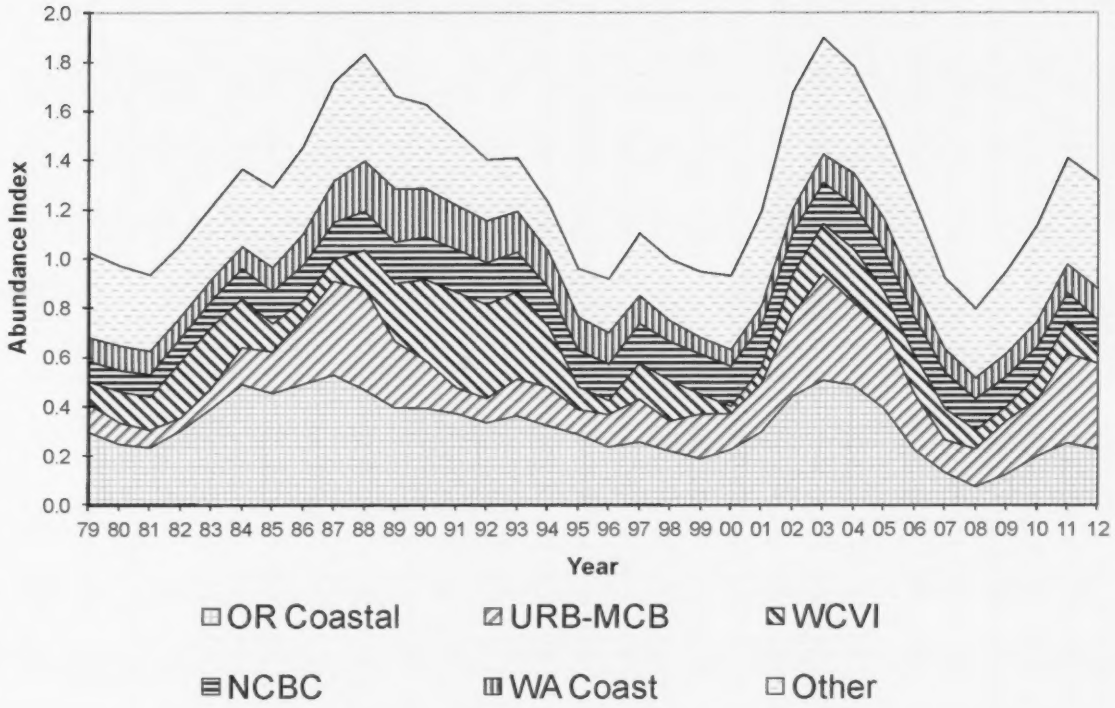

Figure 3-8. Stock composition of the abundance indices for the Northern BC troll fishery from CLB 1209.

The major model stock groups in the AI for the WCVI fishery are: Columbia River (CR) Tules, Puget Sound, Fraser Lates, URB-MCB, and WCVI Natural and Hatchery (Figure 3-9). The "Other" category is comprised primarily of Oregon Coast, Columbia Summers, and Washington Coastal.

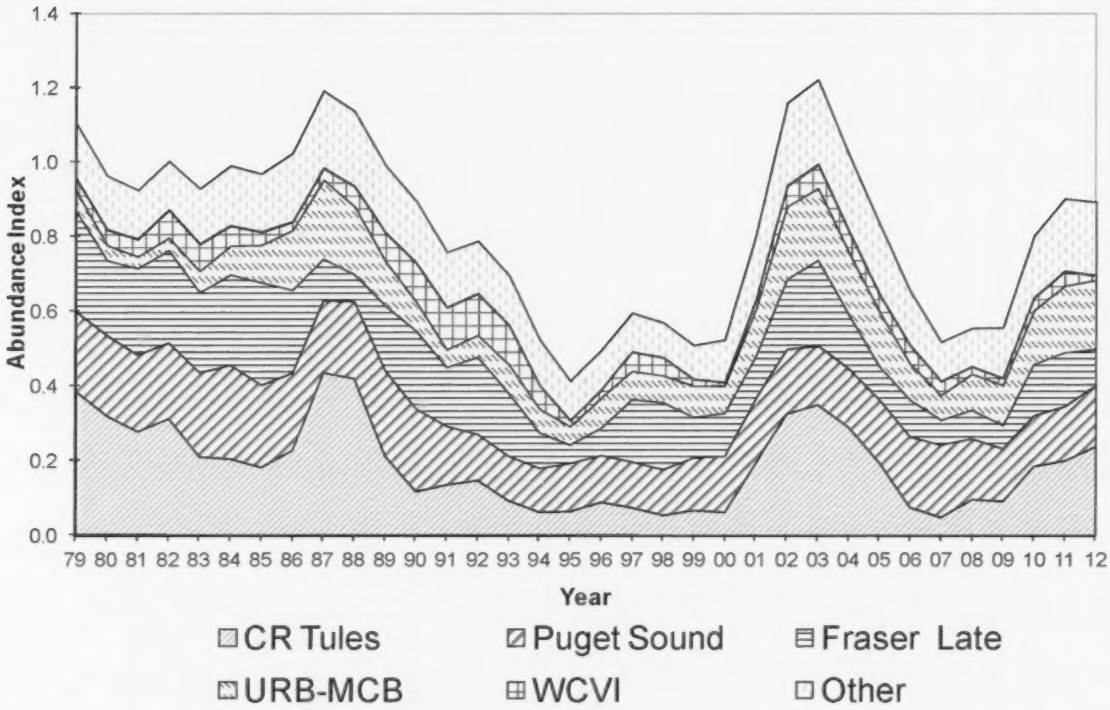

Figure 3-9. Stock composition of the abundance indices for the WCVI troll fishery from CLB 1209.

3.4 Overages and Underages

Until an approach for full implementation of overage/underage provisions has been developed and accepted by the PSC, the Commissioners have instructed the CTC to track and report overages and underages relative to agreed-upon harvest objectives.

3.4.1 AABM Fisheries

Per Treaty subparagraph 11(a)(i), AIs and associated allowable catches from the first postseason model calibration for a given fishing year are used to track catch overages and underages,. Table 3-5 shows the annual differences between the postseason allowable catches and the observed catches in AABM fisheries for 1999–2011, as well as the cumulative differences. In SEAK, the 2011 catch was 2.6% above the postseason allowable catch, and the cumulative differences were 1.8% above. In NBC, the 2011 catch was 34.3% below the preseason allowable catch and the cumulative differences were 23.8% below. In WCVI, the 2011 catch was 51.5% above and the cumulative differences were 2.6% below the postseason allowable catch. The SEAK, NBC, and WCVI AABM fisheries have been over the preseason allowable catch 9, 3, and 8 of the last 13 years, respectively.

Overages and underages in AABM catches, relative to the first postseason calibration for a fishing year (Table 3-5), can arise due to the in-season management system, errors in the

preseason calibration process (e.g., forecast error), or a combination of the two. The relative influence of each was evaluated by inspecting differences in actual landed catch and allowable catches from both preseason and postseason calibrations (Table 3-6). In 2011 regarding the in-season management system, the actual landed catch was less than the preseason allowable catch by 4,085 Chinook salmon in SEAK and by 59,740 in NBC. For WCVI, the actual landed catch was 7,432 more than the preseason allowable catch. In terms of the postseason allowable catches for evaluation of the provisions of the PST (subparagraph 11(a)(i)), actual catches exceeded the postseason allowable catches by 7,415 Chinook salmon in SEAK and by 69,140 in WCVI. Actual landed catch in NBC was 64,140 fish less than the postseason allowable catch.

Table 3-5 Deviations in numbers of Chinook salmon and pe rcentages from catch targets derived from the first postseason AI (Table 3-3) for Pacific Salmon Treaty AABM fisheries in 1999 to 2011.

Year	SEAK		NBC		WCVI	
	Number of Fish	Percent Difference	Number of Fish	Percent Difference	Number of Fish	Percent Difference
1999	14,642	7.9%	-39,374	-31.2%	-70,587	-66.0%
2000	7,993	4.5%	-91,600	-74.2%	15,238	17.7%
2001	-63,381	-25.3%	-115,400	-72.6%	-27,830	-19.1%
2002	-14,767	-4.0%	-87,663	-36.9%	-31,764	-16.1%
2003	-60,081	-13.7%	-85,543	-30.9%	-93,079	-34.6%
2004	-1,281 3,366	-0.3% 0.8%[1]	-25,492	-9.5%	7,024	3.4%
2005	4,599	1.2%	2,906	1.2%	22,962	12.8%
2006	8,448	2.4%	15,985	8.0%	1,383	1.0%
2007	70,604	27.2%	1,235	0.9%	17,250	14.2%
2008	20,482	13.4%	-25,253	-20.9%	8,826	6.4%
2009[2]	54,647	31.0%	-29,630	-21.3%	33,317	36.5%
2010	15,791	7.3%	-23,787	-14.8%	-3,253	-2.3%
2011	7,415	2.6%	-64,140	-34.3%	69,432	51.5%
Cum.	65,110 69,758	1.8% 1.9%[1]	-567,756	-23.8%	-51,081	-2.6%

[1] The lower value resulted from subtracting a disputed terminal exclusion catch for the Stikine River in 2004. Catch accounting has since been defined in the Transboundary Agreement.
[2]This is the first catch year in which fisheries operated under the provisions of the 2009 agreement; cumulative deviations span the entire record that is displayed.

Table 3-6 Deviations in actual landed catch (LC), allowable landed catch determined from preseason model calibration (PreALC), and allowable landed catch determined from postseason model calibration (PostALC) for AABM fisheries from 1999 to 2011. The difference between LC and PreALC represents the consequences of the management system employed in the year. The difference between PreALC and PostALC represents consequences of the forecast procedures and data used in forecasting the PreALC by the PSC Chinook Model. The difference between LC and PostALC represents the combined effects of both processes.

Year	SEAK			NBC			WCVI		
	LC–PreALC	PreALC–PostALC	LC–PostALC	LC–PreALC	PreALC–PostALC	LC–PostALC	LC–PreALC	PreALC–PostALC	LC–PostALC
1999	6,042	8,600	14,642	-70,473	19,500	-50,973	-89,760	21,300	-68,460
2000	-3,407	11,400	7,993	-97,952	6,500	-91,452	-26,883	29,300	2,417
2001	-2,981	-60,400	-63,381	-88,849	-26,300	-115,149	-20,896	-4,300	-25,196
2002	633	-15,400	-14,767	-42,579	-45,100	-87,679	-45,314	6,400	-38,914
2003	13,419	-73,500	-60,081	-2,938	-80,100	-83,038	-8,239	-87,100	-95,339
2004	33,519 38,166	-34,800 -34,800	-1,281 3,366[1]	-294	-23,400	-23,694	22,752	-17,100	5,652
2005	-24,401	29,000	4,599	-2,994	5,900	2,906	11,279	8,500	19,779
2006	16,148	-7,700	8,448	-7,215	23,200	15,985	-14,915	14,900	-15
2007	404	70,200	70,604	-33,765	35,000	1,235	-2,686	21,400	18,714
2008	3,382	17,100	20,482	-29,153	3,900	-25,253	-16,874	25,700	8,826
2009[2]	11,847	42,800	54,647	-34,330	4,700	-29,630	16,817	16,500	33,317
2010	9,791	6,000	15,791	-15,487	-8,300	-23,787	-4,653	1,400	-3,253
2011	-4,085	11,500	7,415	-59,740	-4,400	-64,140	7,432	62,000	69,432

[1] The lower value resulted from subtracting a disputed terminal exclusion catch for the Stikine River in 2004. Catch accounting has since been defined in the Transboundary Agreement.
[2]This is the first catch year in which fisheries operated under the provisions of the 2009 agreement.

3.5 ISBM Indices by Stock

For ISBM fisheries, the 2008 PSC Agreement specifies that Canada and the United States will reduce base period exploitation rates on specified stocks by 36.5% and 40%, equivalent to ISBM indices of 63.5% and 60% percent, respectively. This requirement is referred to as the 'general obligation' and does not apply to stocks that achieve their CTC agreed escapement goal. Estimated ISBM fishery indices are shown in Table 3-7 for Canadian fisheries and Table 3-8 for U.S. fisheries. Both tables present CWT-based indices for 2010, and Chinook model-based predicted indices for 2012. The agreement specifies that the indices for postseason assessment be assessed using the CWT-based estimates; 2010 is the most recent analysis available for all stocks (see section 3.5.3 for an analysis for a subset of ISBM fisheries/stocks for 2011). CWT-based indices for 1999-2010 and model-based indices for 1999-2012 are presented in Appendix B.

Table 3-7 Canadian 2010 ISBM indices based on 2010 and 2012 PSC Chinook Model, 2012 CWT analysis and the 2012 indices predicted from the 2012 PSC Chinook Model. Footnotes appear on the following page.

Stock Group	Escapement Indicator Stock	2010 Model Indices for 2010	2012 Model Indices for 2010	CWT Indices for 2010	2012 Model Indices for 2012
Lower Strait of Georgia	Cowichan	0.203 [8]	0.258 [6]	0.261 [4]	0.443 [6]
	Nanaimo			NA [1,5]	
Fraser Late	Harrison River [2]	0.138	0.161	0.134 [7]	0.256
North Puget Sound Natural Springs	Nooksack	0.568	0.154	0.014	0.339
	Skagit	0.568	0.154	NA	0.340
Upper Strait of Georgia	Klinaklini, Kakweikan, Wakeman, Kingcome, Nimpkish	0.122	0.109	0.182	0.596
Fraser Early (spring and summers)	Upper Fraser, Mid Fraser, Thompson	0.121	0.109	NA	0.226
West Coast Vancouver Island Falls	WCVI (Artlish, Burman, Kauok, Tahsis, Tashish, Marble)	0.122	0.188	0.135 [8]	0.636
Puget Sound Natural Summer/Falls	Skagit	0.709	0.114	NA	1.421
	Stillaguamish	0.791	0.177	0.083	1.329
	Snohomish	0.718	0.116	NA	1.359
	Lake Washington	0.690	0.149	NA	0.991 [9]
	Green River	0.670	0.149	0.151	1.000
North / Central B. C.	Yakoun, Nass, Skeena, Area 8	0.177	0.126	NA	0.536
Washington Coastal Fall Naturals [3]	Hoko, Grays Harbor, Queets [2], Hoh [2], Quillayute[2]	0.134	0.101	NA	0.357
Columbia River Falls [3]	Upriver Brights [2]	0.110	0.071	NA	0.572
	Deschutes	0.110	0.071	NA	0.572
	Lewis [2]	0.920	0.016	NA	3.345
Columbia R Summers [3]	Mid-Columbia Summers [2]	0.084	0.051	NA	0.296
Far North Migrating OR Coastal Falls [3]	Nehalem [2], Siletz [2], Siuslaw [2]	NA	0.021	NA	0.540

[1] Not available (NA) because of insufficient data (lack of stock specific tag codes, base period CWT recoveries, etc).
[2] Stock or stock group with a CTC agreed escapement goal.
[3] Stock group listed in Annex 4, Chapter 3, Attachment V.
[4] An inconsistency was discovered between the approaches used to calculate the model-based and CWT-based indices. The former included harvest rates for terminal sport while the latter did not. Terminal sport harvest rates are now included in the calculation of both indices. Further review is yet required to determine whether the base period terminal sport harvest rates obtained from analyses of Big Qualicum CWT recoveries adequately represent impacts that would have occurred on Cowichan Chinook.
[5] Several problems have been identified in the approach previously used to calculate the CWT-based indices for Nanaimo Chinook. Until these problems are resolved, indices for this stock will not be reported.
[6] Although model-based indices were previously calculated separately for Cowichan and Nanaimo, these did not adequately represent impacts on either LGS stock because the model-based data represent an aggregate of the two stocks and methods do not currently exist to correctly disaggregate these data for calculation of the ISBM values. Until such methods are developed, a single index value only will be reported representing the aggregate.
[7] The terminal sport harvest rates for Chilliwack Hatchery Chinook, the indicator stock, were removed from the calculation for the Harrison River naturals because sport harvest has been essentially zero on the natural population.
[8] An inconsistency was discovered between the approaches used to calculate the model-based and CWT-based indices. The former included harvest rates for terminal sport while the latter did not. Terminal sport harvest rates are now included in the calculation of both indices. A more extended review of the indices for WCVI Chinook will be carried out to determine whether they adequately represent impacts on the WCVI wild aggregate.
[9] For Canadian ISBM fisheries, Lake Washington and Green the same distribution and index value are assumed.

Table 3-8 US 2010 ISBM indices based on 2010 and 2012 PSC Chinook Model, 2012 CWT analysis and the 2012 indices predicted from the 2012 PSC Chinook Model. Footnotes appear on the following page.

Stock Group	Escapement Indicator Stock	2010 Model Indices for 2010	2012 Model Indices for 2010	CWT Indices for 2010	2012 Model Indices for 2012
Washington Coastal Fall Naturals	Hoko	0.130	0.424	NA [1]	0.378
	Grays Harbor	0.382	0.579	0.69	0.604
	Queets [4]	0.285	0.186	0.67	0.179
	Hoh [4]	0.987	0.454	1.00	0.443
	Quillayute [4]	0.963	1.188	0.67	1.151
Columbia River Falls	Upriver Brights [4]	0.801	0.782	1.75	0.894
	Deschutes [4]	1.004	0.58	0.79	0.684
	Lewis [4]	0.505	0.353	0.43	0.442
Puget Sound Natural Summer / Falls	Skagit	0.261	0.177	NA	0.327
	Stillaguamish	0.117	0.056	0.38	1.054
	Snohomish	0.125	0.069	NA	0.332
	Lake Washington	0.517	0.295	NA	0.590
	Green R	0.520	0.299	0.34	0.631
Fraser Late	Harrison River [4]	0.209	0.587	0.47	0.448
Columbia R Summers	Mid-Columbia Summers [4]	1.142	1.711	9.81	1.369
Far North Migrating OR Coastal Falls	Nehalem [4]	0.916	1.939	1.21	1.696
	Siletz [4]	0.698	0.64	0.50	0.814
	Siuslaw [4]	2.028	1.304	0.77	1.646
North Puget Sound Natural Springs	Nooksack	0.181	0.059	0.70	0.171
	Skagit	0.245	0.087	NA	0.147
Lower Strait of Georgia [3]	Cowichan,	0.216	0.404	4.33	0.370
	Nanaimo		NA	NA	NA
Upper Strait of Georgia [3]	Klinaklini, Kakweikan, Wakeman, Kingcome, Nimpkish	NC	NC [2]	NC [2]	NC [2]
Fraser Early (spring and summers) [3]	Upper Fraser, Mid Fraser, Thompson	0.111	0.268	NA	0.228
West Coast Vancouver Island Falls [3]	WCVI (Artlish, Burman, Kauok, Tahsis, Tashish, Marble)	0.213	0.222	NA	0.420
North / Central B. C. [3]	Yakoun, Nass, Skeena, Area 8	NC[2]	NC [2]	NC [2]	NC [2]

[1] Not available (NA) because of insufficient data (lack of stock specific tag codes, base period CWT recoveries, etc).
[2] NC means that the current model assumes the stock is not caught in U.S. ISBM fisheries.
[3] Stock group listed in Annex 4, Chapter 3, Attachment IV.. [4] Stock with a CTC agreed escapement goal.

3.5.1 CWT-based Indices in 2010

Figure 3-10 and Figure 3-11 show the historical ISBM indices based on CWT recoveries from 1999 to 2009. The ISBM fishery restrictions do not apply to stocks meeting the escapement goals, however should the escapement goal not be met, the general obligation needs to be achieved.

Canadian ISBM indices for 2010, estimated from the CWT data were reduced more than required under the agreement for the seven indices that could be calculated. We identified several inconsistencies in the way these indices had been computed in the past, as noted above (Table 3-7, footnotes 4-9). Most inconsistencies were between model versus CWT exploitation rate based methods of calculating ISBM indices. In the case of Lower Georgia Strait, Nanaimo was dropped from the CWT-based index because of concern about the method of estimating the terminal fishery rates. Nanaimo and Cowichan stocks are no longer reported separately in the model-based index because a way to split the two stocks in the base period has not yet been developed.

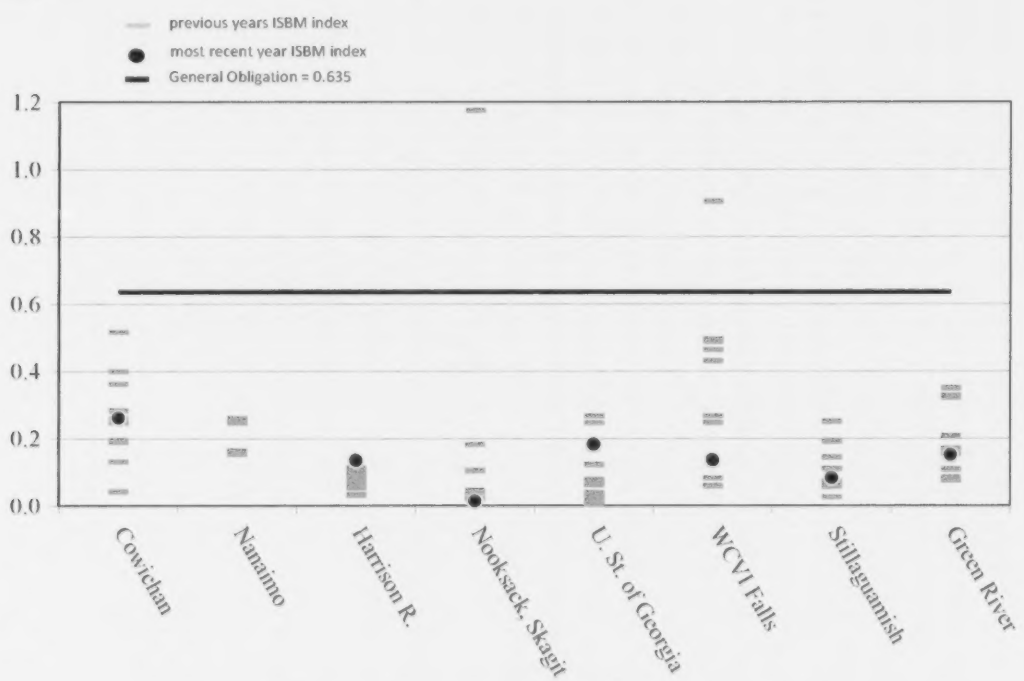

Figure 3-10. CWT-based ISBM indices for Canadian fisheries for 1999-2010.

Five of the 16 U.S. ISBM indices for the CWT-based estimates for 2010 were reduced more than required. The other 11 U.S. CWT-based ISBM indices exceeded 0.60. All of these stocks met or exceeded their respective escapement goals, and thus are exempted from the general obligation.

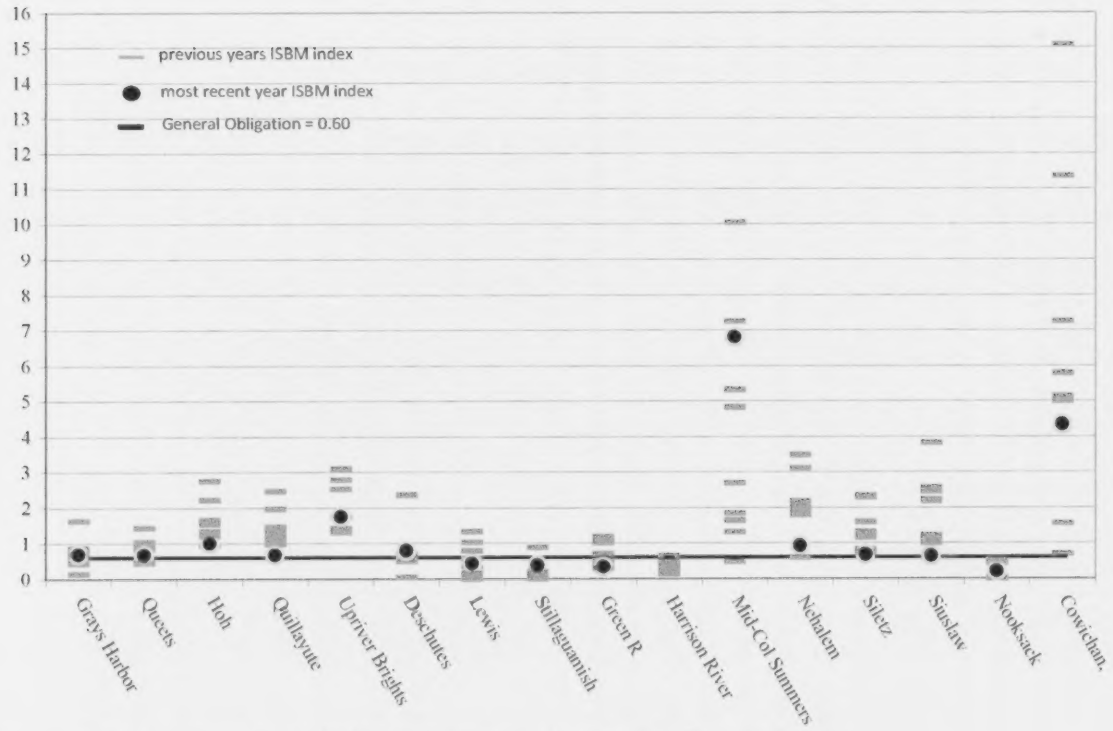

Figure 3-11. CWT-based ISBM indices for U.S. fisheries for 1999-2010.

3.5.2 Predicted ISBM Indices for 2012

Seven of the 19 ISBM indices for Canada are predicted to exceed the allowable value of 0.635 for Canadian ISBM fisheries in 2012 based on outputs from calibration 1209 (Table 3-7). Six of these seven stocks do not have CTC-accepted management objectives and include all Puget Sound Natural Summer/Fall stocks and WCVI. The remaining stock, the Lewis River, exceeded its CTC escapement goal in 2011.

Ten of the 23 U.S. ISBM indices are predicted to be above the allowable limit of 0.60 for U.S. ISBM fisheries in 2012 based on calibration 1209 (Table 3-8). All but Grays Harbor, Greeen River, and Stillaguamish (which has an exploitation rate objective) have CTC agreed escapement goals: Quillayute, Columbia Upriver Brights, Deschutes, Mid-Columbia Summers, Nehalem, Siletz, and Siuslaw. Of the stocks with goals, all were above their goals in 2011.

3.5.3 CWT ISBM Indices for 2011

One of the limitations of the current ISBM indices relates to delayed data availability (CTC 2011). The data needed to calculate the postseason ISBM CWT-based index for several stocks caught in U.S. ISBM fisheries are not available at the time the index must be computed for timely use. Catch estimates from some U.S. ISBM fisheries may not be available until at least one year after a fishery has occurred, either because the catch data are unavailable or because

multiple agencies have not reached timely agreement on the 'final' catch estimates needed to generate expansion factors for CWT recoveries. Because these recoveries are needed to estimate cohort sizes, the consequence of these delays in the availability of CWT data from some U.S. fisheries is that the ISBM indices for both countries may not be computed within a timeframe for ISBM evaluations and to inform fishing plans for the upcoming season. Each agency's procedures for sampling fisheries for CWTs, decoding CWTs, and data management generally meet the timelines necessary for the CTC to develop the ISBM indices on time. However, the catch estimates that are necessary to expand the CWT sample data and some of the escapement CWT samples are not available on time for some Washington and Oregon sport and net fisheries.

One of the recommendations of the CTC's ISBM workgroup was that if late CWT data reporting issues are irresolvable for some U.S. ISBM fisheries, then estimation models should be developed and reviewed to enable the CTC to report the ISBM indices on time to use in the preseason management process for the next season (CTC 2011). Reducing the two-year time lag for CWT-based indices is highly desirable and possible for some Canadian stocks with timely available catch and CWT recovery data. The computation of CWT-based ISBM indices for year 2011 was possible for four Canadian stocks and these values are shown in Table 3-9. ISBM indices for stock groups Lower Strait of Georgia, Fraser Late, and Upper Strait of Georgia were below the general obligation, within the range observed from 1999 to 2010, and relatively close to the period average. The 2011 CWT index value for the WCVI stock group was greater than the general obligation and substantially larger than the index average for 1999-2010. There is a precedent of a higher CWT-based ISBM index value (0.906) for this stock group in 2007.

Table 3-9. 2011 Canadian and U.S. CWT-based ISBM indices for Canadian stock groups based on 2012 CWT analysis, their average CWT index values for 1999-2010, and model-based ISBM indices for 2011 and the average model values for 1999-2012. Values in parenthesis represent standard deviations.

Stock Group	Escapement Indicator Stock	Canadian ISBM			
		CWT Indices 2011	CWT Indices Average (1999-2010)	Model Indices 2011	Model Indices Average (1999-2012)
Lower Strait of Georgia	Cowichan	0.172	0.251 (0.133)	0.367	0.414 (0.146)
Fraser Late	Harrison River	0.103	0.063 (0.031)	0.193	0.292 (0.138)
Upper Strait of Georgia	Klinaklini, Kakweikan, Wakeman, Kingcome, Nimpkish	0.033	0.096 (0.090)	0.578	0.423 (0.273)
West Coast Vancouver Island Falls	WCVI (Artlish, Burman, Kauok, Tahsis, Tashish, Marble)	0.788	0.387 (0.259)	0.491	0.555 (0.405)
U.S. ISBM					
Lower Strait of Georgia	Cowichan	2.27	6.402 (4.301)	0.367	0.402 (0.257)
Fraser Late	Harrison River	0.27	0.351 (0.164)	0.497	0.599 (0.237)

3.6 General Forecast Methods

For those stocks with externally provided forecasts of abundance in 2012, management agencies used two general methods to predict terminal returns or escapements:

Sibling Models. Empirical relationships between abundance (commonly measured as terminal run size) of age a fish in calendar year CY and the comparable abundance of age a+1 fish in year CY+1 are used to predict abundance in 2012 from data collected in previous years (forecast type S in Table 3-2).

Average Return Rate Models. Return rates of adults by age from smolts or parents are averaged over past brood years, then these averages are used to discount abundance of smolts or parents for brood years that will be exploited in 2012 (forecast type R in Table 3-2).

3.6.1 Agency Stock Forecast Used In The Model

A summary of model-produced and agency-produced forecasts from 1999-2012 is shown in Table 3-10. The relationship between the model indicator stocks and exploitation rate indicator stocks and PST Annex stocks are shown in Appendix A. A major factor influencing the ability of the model to predict Chinook salmon abundance in AABM fisheries is the ability of the model to predict the returns of Chinook salmon (in terms of ocean escapement or spawning escapement) in the forecast year. During model calibration, agency forecasts are input to the model for all model stocks for which model forecasts are available. Thus, for model stocks with external forecasts, the variation between model forecasts and actual returns can be broken into two parts: the ability of the model to match the agency forecasts used as inputs to the model, and the ability of the agency forecasts to accurately predict the actual return of Chinook salmon in the upcoming year. In Table 3-10 the column labeled 'Model Fcst/Agency Fcst' shows the ratio of the model prediction and the agency forecast as a percentage. The column labeled 'Agency Fcst/Postseason' shows the ratio of the agency forecast and the actual return as a percentage. The column labeled 'Model Fcst/Postseason' shows the ratio of the return predicted by the model and the actual return as a percentage. A value of 100% would indicate that the predicted and actual values were the same.

The model forecasts are similar to the agency forecasts on average. This result is strongly influenced by the incorporation of the agency forecasts into the model calibration procedure. The mean absolute percent error (MAPE) of all 'Model Fcst/Agency Fcst' is 12.0%, and the average percent error is 0.4%. For all agency forecasts, the MAPE is 36.5% and the average percent error is -8.5% with respect to the postseason estimate. For model forecasts, the MAPE is 35.2% with respect to the postseason estimate, whereas, the average percent error is -7.6%

The effect of the error in predicting terminal returns or escapement on the AABM abundance indices varies between fisheries and stocks. There is no clear directional bias of this error. For example, a small stock (small in ocean abundance terms) that is over or under predicted will generally not have a large effect on a fishery's abundance index. Errors in predicting a large stock may or may not affect a fishery's index, depending on the contribution of that stock to the fishery in question (see Appendix F for the model estimated stock composition of selected ocean fisheries). In addition, since the abundance index is a relative, rather than an absolute measure of abundance, over or under prediction of a stock's terminal return or escapement would not affect the abundance index of a fishery if the bias in the prediction is consistent over all years in the index, including the base period.

Table 3-10 Preseason forecasts and postseason estimates for PSC model stocks, 1999-2011.

Stock	Year	Model Forecast	Agency Forecast	Postseason Return	Model Fcst/ Agency Fcst	Agency Fcst/ Postseason	Model Fcst/ Postseason
AKS[1] (Alaska SSE)	1999	11,866	n/a	12,337	n/a	n/a	96%
	2000	18,967	n/a	16,361	n/a	n/a	116%
	2001	22,130	n/a	21,585	n/a	n/a	103%
	2002	15,650	n/a	18,676	n/a	n/a	84%
	2003	22,316	n/a	14,619	n/a	n/a	153%
	2004	11,880	n/a	17,274	n/a	n/a	69%
	2005	25,204	n/a	15,254	n/a	n/a	165%
	2006	17,988	n/a	20,730	n/a	n/a	87%
	2007	25,653	n/a	15,084	n/a	n/a	170%
	2008	14,626	n/a	13,735	n/a	n/a	106%
	2009	14,332	n/a	10,428	n/a	n/a	137%
	2010	16,445	n/a	16,194	n/a	n/a	102%
	2011	17,946	n/a	11,938	n/a	n/a	150%
	2012	12,557	n/a		n/a		
	AVG.				n/a	n/a	118%
NTH[2] (North/ Central BC)	1999	149,593	n/a	154,294	n/a	n/a	97%
	2000	159,818	n/a	188,482	n/a	n/a	85%
	2001	189,088	n/a	214,541	n/a	n/a	88%
	2002	228,073	n/a	150,870	n/a	n/a	151%
	2003	161,995	n/a	170,410	n/a	n/a	95%
	2004	171,070	n/a	158,967	n/a	n/a	108%
	2005	154,552	n/a	139,303	n/a	n/a	111%
	2006	133,627	n/a	157,627	n/a	n/a	85%
	2007	156,017	n/a	126,159	n/a	n/a	124%
	2008	131,262	n/a	113,750	n/a	n/a	115%
	2009	113,024	n/a	126,805	n/a	n/a	89%
	2010	136,998	n/a	114,707	n/a	n/a	119%
	2011	115,399	n/a	95,175	n/a	n/a	121%
	2012	98,010	n/a		n/a		
	AVG.				n/a	n/a	107%
RBH+RBT[2] (WCVI Hatchery + Natural)	1999	78,074	68,400	101,683	114%	67%	77%
	2000	21,040	15,040	37,047	140%	41%	57%
	2001	33,702	30,633	87,004	110%	35%	39%
	2002	128,068	109,882	167,731	117%	66%	76%
	2003	111,430	105,801	215,346	105%	49%	52%
	2004	166,548	144,180	262,103	116%	55%	64%
	2005	244,768	218,840	157,262	112%	139%	156%
	2006	152,662	138,878	197,097	110%	70%	77%
	2007	151,925	117,321	118,082	129%	99%	129%
	2008	67,347	60,255	98,267	112%	61%	69%
	2009	63,200	58,382	87,252	108%	67%	72%
	2010	75,748	61,586	92,480	123%	67%	82%
	2011	86,660	74,708	161,914	116%	46%	54%
	2012	70,838	54,765		129%		
	AVG.				117%	66%	77%

Table 3-10 Continued.

Stock	Year	Model Forecast	Agency Forecast	Postseason Return	Model Fcst/ Agency Fcst	Agency Fcst/ Postseason	Model Fcst/ Postseason
GSQ[1] (Upper Strait of Georgia)	1999	16,472	n/a	16,103	n/a	n/a	102%
	2000	19,452	n/a	23,471	n/a	n/a	83%
	2001	25,828	n/a	31,271	n/a	n/a	83%
	2002	41,492	n/a	32,060	n/a	n/a	129%
	2003	36,882	n/a	31,376	n/a	n/a	118%
	2004	39,766	n/a	27,338	n/a	n/a	145%
	2005	38,798	n/a	26,983	n/a	n/a	144%
	2006	39,577	n/a	31,887	n/a	n/a	124%
	2007	41,711	n/a	22,806	n/a	n/a	183%
	2008	30,065	n/a	18,002	n/a	n/a	167%
	2009	26,131	n/a	21,323	n/a	n/a	123%
	2010	26,624	n/a	18,765	n/a	n/a	142%
	2011	14,585	n/a	19,470	n/a	n/a	75%
	2012	25,756	n/a		n/a		
	AVG.				n/a	n/a	124%
GSH[2] (Lower Strait of Georgia Hatchery)	1999	23,648	n/a	23,015	n/a	n/a	103%
	2000	19,165	n/a	21,322	n/a	n/a	90%
	2001	17,547	n/a	29,633	n/a	n/a	59%
	2002	25,051	n/a	22,064	n/a	n/a	114%
	2003	22,409	n/a	21,496	n/a	n/a	104%
	2004	16,573	n/a	20,852	n/a	n/a	79%
	2005	21,046	n/a	25,941	n/a	n/a	81%
	2006	22,937	n/a	22,109	n/a	n/a	104%
	2007	24,378	n/a	12,733	n/a	n/a	191%
	2008	11,765	n/a	12,011	n/a	n/a	98%
	2009	7,371	n/a	13,380	n/a	n/a	55%
	2010	7,999	n/a	11,605	n/a	n/a	69%
	2011	9,159	n/a	9,555	n/a	n/a	96%
	2012	10,104	n/a		n/a		
	AVG.				n/a	n/a	96%
GST[1] (Lower Strait of Georgia Natural)	1999	14,737	n/a	8,715	n/a	n/a	169%
	2000	11,094	n/a	8,223	n/a	n/a	135%
	2001	7,955	n/a	8,569	n/a	n/a	93%
	2002	8,833	n/a	7,812	n/a	n/a	113%
	2003	8,088	n/a	5,903	n/a	n/a	137%
	2004	5,157	n/a	3,642	n/a	n/a	142%
	2005	4,459	n/a	4,870	n/a	n/a	92%
	2006	4,945	n/a	4,880	n/a	n/a	101%
	2007	7,782	n/a	4,778	n/a	n/a	163%
	2008	6,823	n/a	5,646	n/a	n/a	121%
	2009	5,691	n/a	3,106	n/a	n/a	183%
	2010	2,972	n/a	6,176	n/a	n/a	48%
	2011	6,222	n/a	7,873	n/a	n/a	79%
	2012	11,433	n/a		n/a		
	AVG.				n/a	n/a	121%

Table 3-10 Continued.

Stock	Year	Model Forecast	Agency Forecast	Postseason Return	Model Fcst/ Agency Fcst	Agency Fcst/ Postseason	Model Fcst/ Postseason
FRE[2] (Fraser Early)	1999	163,342	n/a	105,473	n/a	n/a	155%
	2000	118,058	n/a	116,233	n/a	n/a	102%
	2001	122,333	n/a	154,175	n/a	n/a	79%
	2002	170,232	n/a	186,827	n/a	n/a	91%
	2003	175,919	n/a	188,183	n/a	n/a	93%
	2004	185,450	n/a	141,029	n/a	n/a	131%
	2005	151,591	n/a	134,641	n/a	n/a	113%
	2006	186,279	n/a	203,212	n/a	n/a	92%
	2007	196,060	n/a	110,884	n/a	n/a	177%
	2008	128,347	n/a	148,284	n/a	n/a	87%
	2009	129,707	n/a	134,307	n/a	n/a	97%
	2010	144,214	n/a	203,680	n/a	n/a	71%
	2011	148,766	n/a	164,913	n/a	n/a	90%
	2012	175,729	n/a		n/a		
	AVG.				n/a	n/a	106%
FRL[1] (Fraser Late)	1999	144,316	82,650	184,099	175%	45%	78%
	2000	187,970	222,400	120,744	85%	184%	156%
	2001	141,745	131,800	141,196	108%	93%	100%
	2002	132,946	160,100	165,245	83%	97%	80%
	2003	127,144	114,780	313,929	111%	37%	41%
	2004	104,597	97,227	196,396	108%	50%	53%
	2005	121,315	108,061	124,704	112%	87%	97%
	2006	116,263	116,682	108,639	100%	107%	107%
	2007	122,402	107,311	105,385	114%	102%	116%
	2008	125,100	116,038	88,012	108%	132%	142%
	2009	119,886	91,391	87,365	131%	105%	137%
	2010	119,953	118,891	188,875	101%	63%	64%
	2011	179,875	284,604	178,224	63%	160%	101%
	2012	107,738	93,652		115%		
	AVG.				108%	97%	98%
NKS[1] (Nooksack Spring)	1999	1068	n/a	251	n/a	n/a	425%
	2000	834	n/a	444	n/a	n/a	188%
	2001	982	n/a	531	n/a	n/a	185%
	2002	1216	n/a	513	n/a	n/a	237%
	2003	1301	n/a	414	n/a	n/a	314%
	2004	1708	n/a	448	n/a	n/a	381%
	2005	1549	n/a	330	n/a	n/a	469%
	2006	485	677	630	72%	107%	77%
	2007	582	575	334	101%	172%	174%
	2008	371	378	351	98%	108%	106%
	2009	336	315	291	107%	108%	115%
	2010	374	390	204	96%	191%	183%
	2011	259	309	109	84%	283%	238%
	2012	271	243		112%		
	AVG.				96%	162%	238%

Table 3-10 Continued.

Stock	Year	Model Forecast	Agency Forecast	Postseason Return	Model Fcst/ Agency Fcst	Agency Fcst/ Postseason	Model Fcst/ Postseason
NKF[2] (Nooksack/ Samish Fall Fingerling)	1999	27,472	27,000	43,655	102%	62%	63%
	2000	21,277	19,000	34,519	112%	55%	62%
	2001	33,974	36,450	68,884	93%	53%	49%
	2002	50,361	54,420	62,938	93%	86%	80%
	2003	48,259	45,750	33,722	105%	136%	143%
	2004	37,980	34,200	19,102	111%	179%	199%
	2005	19,808	19,523	20,560	101%	95%	96%
	2006	16,854	16,899	38,635	100%	44%	44%
	2007	22,086	18,834	32,770	117%	57%	67%
	2008	34,392	35,271	34,181	98%	103%	101%
	2009	20,813	23,014	25,679	90%	90%	81%
	2010	32,061	32,627	40,798	98%	80%	79%
	2011	30,839	37,902	37,975	81%	100%	81%
	2012	45,719	43,973		104%		
	AVG.				100%	88%	88%
SNO[2] (Snohomish Wild)	1999	5,823	5,600	4,839	104%	116%	120%
	2000	5,997	6,000	6,120	100%	98%	98%
	2001	5,876	5,760	8,464	102%	68%	69%
	2002	6,524	6,700	7,266	97%	92%	90%
	2003	6,033	5,450	5,597	111%	97%	108%
	2004	12,845	15,700	10,701	82%	147%	120%
	2005	10,161	n/a	4,680	n/a	n/a	217%
	2006	7,831	8,729	8,481	90%	103%	92%
	2007	11,153	12,289	4,004	91%	307%	279%
	2008	6,103	6,541	8,494	93%	77%	72%
	2009	7,558	8,410	2,347	90%	358%	322%
	2010	8,050	9,858	4,697	82%	210%	171%
	2011	7,437	7,600	1,192	98%		
	2012	2,506	2,775		90%		
	AVG.				95%	152%	147%
SKG[2] (Skagit Summer/ Fall Wild)	1999	9,107	7,600	5,139	120%	148%	177%
	2000	6,988	7,300	16,266	96%	45%	43%
	2001	9,064	9,184	14,193	99%	65%	64%
	2002	12,635	13,455	18,114	94%	74%	70%
	2003	11,906	11,348	10,583	105%	107%	113%
	2004	18,761	20,359	22,144	92%	92%	85%
	2005	16,220	19,493	22,784	83%	86%	71%
	2006	22,765	21,811	21,246	104%	103%	107%
	2007	12,324	14,252	12,646	86%	113%	97%
	2008	18,598	18,302	14,254	102%	128%	130%
	2009	19,607	20,400	10,977	96%	186%	179%
	2010	9,894	11,853	7,926	83%	150%	125%
	2011	11,210	13,044	8,382	86%	156%	134%
	2012	10,020	8,337		120%		
	AVG.				98%	112%	107%

Table 3-10 Continued.

Stock	Year	Model Forecast	Agency Forecast	Postseason Return	Model Fcst/ Agency Fcst	Agency Fcst/ Postseason	Model Fcst/ Postseason
PSN[2] (Puget Sound Natural)	1999	28,800	28,400	26,807	101%	106%	107%
	2000	15,364	10,000	23,270	154%	43%	66%
	2001	19,938	18,900	42,441	105%	45%	47%
	2002	20,008	19,801	33,530	101%	59%	60%
	2003	25,743	26,600	17,704	97%	150%	145%
	2004	24,616	23,200	37,801	106%	61%	65%
	2005	22,208	17,715	15,961	125%	111%	139%
	2006	20,207	21,301	23,378	95%	91%	86%
	2007	18,964	17,014	20,321	111%	84%	93%
	2008	23,118	21,100	26,958	110%	78%	86%
	2009	20,287	23,073	9,918	88%	233%	205%
	2010	14,734	15,128	13,401	97%	113%	110%
	2011	14,314	15,997	11,659	89%	137%	123%
	2012	14,396	13,860		104%		
	AVG.				106%	101%	103%
STL[1] (Stillaguamish Summer/Fall Wild)	1999	1,332	n/a	1,194	n/a	n/a	112%
	2000	1,370	1,500	1,612	91%	91%	85%
	2001	1,328	1,360	1,351	98%	98%	98%
	2002	1,372	1,449	1,564	95%	91%	88%
	2003	1,860	2,050	990	91%	207%	188%
	2004	1,795	n/a	1,509	n/a	n/a	119%
	2005	1,377	n/a	1,036	n/a	n/a	133%
	2006	1,116	1,169	1,253	95%	92%	89%
	2007	1,424	1,510	607	94%	192%	235%
	2008	689	637	1,671	108%	35%	41%
	2009	1,268	1,086	1,001	117%	108%	127%
	2010	898	817	783	110%	104%	115%
	2011	718	783	1,018	92%	77%	71%
	2012	569	395		144%		
	AVG.				103%	110%	115%
PSF+PSY[2] (Puget Sound Fingerling + Yearling)	1999	66,876	69,285	139,869	97%	50%	48%
	2000	67,306	69,800	103,367	96%	68%	65%
	2001	102,899	105,955	138,565	97%	76%	74%
	2002	114,889	124,608	142,621	92%	87%	81%
	2003	114,275	133,850	139,415	85%	96%	82%
	2004	127,902	132,300	128,126	97%	103%	100%
	2005	104,084	110,542	157,045	94%	70%	66%
	2006	107,452	113,486	182,965	95%	62%	59%
	2007	127,115	135,714	208,607	94%	65%	61%
	2008	166,071	159,200	148,563	104%	107%	112%
	2009	110,373	133,187	128,493	83%	104%	86%
	2010	138,238	140,074	133,715	99%	105%	103%
	2011	131,361	168,642	131,104	78%	129%	100%
	2012	153,462	153,989		100%		
	AVG.				94%	86%	80%

Table 3-10 Continued.

Stock	Year	Model Forecast	Agency Forecast	Postseason Return	Model Fcst/ Agency Fcst	Agency Fcst/ Postseason	Model Fcst/ Postseason
WCN[2] (Washington Coastal Natural)	1999	42,129	43,780	23,899	96%	175%	176%
	2000	34,741	n/a	26,360	n/a	n/a	132%
	2001	34,563	35,306	34,344	98%	99%	101%
	2002	33,902	33,489	36,175	101%	90%	94%
	2003	32,785	n/a	39,859	n/a	n/a	82%
	2004	28,185	n/a	58,681	n/a	n/a	48%
	2005	34,857	n/a	41,860	n/a	n/a	83%
	2006	45,084	n/a	37,603	n/a	n/a	120%
	2007	35,695	32,362	24,917	110%	130%	143%
	2008	32,187	26,923	30,494	120%	88%	106%
	2009	29,758	31,318	25,767	95%	122%	115%
	2010	39,215	n/a	38,457	n/a	n/a	102%
	2011	28,079	n/a	43,925	n/a	n/a	64%
	2012	45,153	n/a		n/a		
	AVG.				103%	117%	105%
WCH[2] (Washington Coastal Hatchery)	1999	35,239	42,752	14,664	82%	292%	240%
	2000	16,244	n/a	22,545	n/a	n/a	72%
	2001	15,792	n/a	23,156	n/a	n/a	68%
	2002	23,678	n/a	34,685	n/a	n/a	68%
	2003	20,755	18,222	41,839	114%	44%	50%
	2004	28,900	n/a	40,078	n/a	n/a	72%
	2005	28,626	n/a	42,656	n/a	n/a	67%
	2006	37,879	n/a	52,403	n/a	n/a	72%
	2007	41,801	40,497	24,701	103%	164%	169%
	2008	34,841	31,251	27,197	111%	115%	128%
	2009	35,603	42,595	39,087	84%	109%	91%
	2010	38,347	n/a	39,990	n/a	n/a	96%
	2011	33,728	n/a	38,810	n/a	n/a	87%
	2012	45,128	n/a		n/a		
	AVG.				99%	145%	99%
CWS[2] (Cowlitz Spring)	1999	3,363	3,950	4,799	85%	82%	70%
	2000	4,922	6,050	6,132	81%	99%	80%
	2001	3,684	4,849	7,182	76%	68%	51%
	2002	5,534	6,800	11,644	81%	58%	48%
	2003	9,550	11,700	25,584	82%	46%	37%
	2004	20,802	27,350	28,696	76%	95%	72%
	2005	18,349	24,850	16,227	74%	153%	113%
	2006	12,841	15,250	19,685	84%	77%	65%
	2007	9,945	10,600	19,519	94%	54%	51%
	2008	9,544	12,400	6,838	77%	181%	140%
	2009	5,122	14,400	7,867	36%	183%	65%
	2010	18,927	19,409	12,410	98%	156%	153%
	2011	8,427	10,602	6,264	79%	169%	135%
	2012	9,287	8,724		106%		
	AVG.				81%	109%	83%

Table 3-10 Continued.

Stock	Year	Model Forecast	Agency Forecast	Postseason Return	Model Fcst/ Agency Fcst	Agency Fcst/ Postseason	Model Fcst/ Postseason
WSH[2] (Willamette Spring)	1999	46,187	49,875	57,787	93%	86%	80%
	2000	57,202	61,211	61,292	93%	100%	93%
	2001	59,207	59,600	85,695	99%	70%	69%
	2002	73,151	77,434	127,613	94%	61%	57%
	2003	108,530	112,521	132,199	96%	85%	82%
	2004	113,708	112,701	157,126	101%	72%	72%
	2005	105,111	122,280	68,642	86%	178%	153%
	2006	48,879	52,388	64,044	93%	82%	76%
	2007	44,542	61,071	43,301	73%	141%	103%
	2008	20,185	40,851	32,628	49%	125%	62%
	2009	41,793	41,205	42,088	101%	98%	99%
	2010	70,960	66,360	119,114	107%	56%	60%
	2011	113,667	109,600	84,603	104%	130%	134%
	2012	105,098	88,202		119%		
	AVG				94%	99%	88%
SUM[2] (Columbia River Summer)	1999	21,651	20,900	21,867	104%	96%	99%
	2000	27,214	28,038	22,595	97%	124%	120%
	2001	27,029	24,500	52,960	110%	46%	51%
	2002	70,290	77,700	89,524	90%	87%	79%
	2003	97,280	87,600	83,058	111%	105%	117%
	2004	83,246	78,589	65,623	106%	120%	127%
	2005	66,190	62,400	60,272	106%	104%	110%
	2006	75,893	78,512	77,573	97%	101%	98%
	2007	56,948	45,555	37,035	125%	123%	154%
	2008	50,171	52,000	55,532	96%	94%	90%
	2009	59,367	70,700	53,881	84%	131%	110%
	2010	81,403	88,800	72,364	92%	123%	112%
	2011	80,607	91,900	80,574	88%	114%	100%
	2012	91,202	91,200		100%		
	AVG				100%	105%	105%
BON+CWF[2] (Bonneville + Cowlitz Hatcheries)	1999	26,651	34,800	39,881	77%	87%	67%
	2000	17,095	23,700	26,971	72%	88%	63%
	2001	28,732	32,200	94,240	89%	34%	30%
	2002	100,401	137,600	156,411	73%	88%	64%
	2003	100,196	115,900	154,960	86%	75%	65%
	2004	64,696	77,100	108,308	84%	71%	60%
	2005	65,971	74,100	73,861	89%	100%	89%
	2006	49,302	55,800	58,317	88%	96%	85%
	2007	49,219	54,900	32,689	90%	168%	151%
	2008	58,557	59,000	60,268	99%	98%	97%
	2009	66,704	88,800	76,738	75%	116%	87%
	2010	95,581	90,600	103,055	105%	88%	93%
	2011	104,985	133,430	108,961	79%	122%	96%
	2012	132,629	127,000		104%		
	AVG				87%	95%	81%

Table 3-10 Continued.

Stock	Year	Model Forecast	Agency Forecast	Postseason Return	Model Fcst/ Agency Fcst	Agency Fcst/ Postseason	Model Fcst/ Postseason
SPR[2] (Spring Creek Hatchery)	1999	62,831	65,800	50,189	95%	131%	125%
	2000	17,335	21,900	20,528	79%	107%	84%
	2001	56,089	56,600	124,954	99%	45%	45%
	2002	153,070	144,400	160,836	106%	90%	95%
	2003	89,116	96,900	180,592	92%	54%	49%
	2004	124,820	138,000	175,245	90%	79%	71%
	2005	92,021	114,100	93,145	81%	122%	99%
	2006	43,624	50,000	27,918	87%	179%	156%
	2007	19,421	21,800	14,549	89%	150%	133%
	2008	87,109	87,200	79,433	100%	110%	110%
	2009	32,585	59,300	48,970	55%	121%	67%
	2010	167,251	169,000	130,768	99%	129%	128%
	2011	70,478	116,400	70,577	61%	165%	100%
	2012	72,135	63,800		113%		
	AVG.				89%	114%	97%
URB[2] (Columbia Upriver Bright)	1999	173,866	147,500	165,889	118%	89%	105%
	2000	212,317	171,100	156,553	124%	109%	136%
	2001	150,973	127,200	232,491	119%	55%	65%
	2002	249,721	281,000	276,948	89%	101%	90%
	2003	246,890	280,400	373,191	88%	75%	66%
	2004	246,943	292,200	362,804	85%	81%	68%
	2005	318,535	352,200	278,339	90%	127%	114%
	2006	231,646	253,900	230,390	91%	110%	101%
	2007	168,594	182,400	114,064	92%	160%	148%
	2008	151,839	162,500	196,881	93%	83%	77%
	2009	226,413	259,900	212,047	87%	123%	107%
	2010	296,816	310,800	324,908	96%	96%	91%
	2011	345,631	398,200	322,234	87%	124%	107%
	2012	365,693	353,500		103%		
	AVG.				97%	102%	98%
LYF[1] (Snake River Wild)	1999	542	n/a	905	n/a	n/a	60%
	2000	1,243	n/a	1,148	n/a	n/a	108%
	2001	733	734	5,163	100%	14%	14%
	2002	2,066	n/a	2,116	n/a	n/a	98%
	2003	2,493	2,185	3,856	114%	57%	65%
	2004	4,323	3,725	2,983	116%	125%	145%
	2005	4,453	4,000	2,602	111%	154%	171%
	2006	8,310	3,500	2,483	237%	141%	335%
	2007	3,128	2,700	2,016	116%	134%	155%
	2008	2,718	2,534	2,222	107%	114%	122%
	2009	5,742	6,952	2,126	83%	327%	270%
	2010	2,609	2,610	9,583	100%	27%	27%
	2011	7,591	8,006	9,215	95%	87%	82%
	2012	10,401	8,683		120%		
	AVG.				118%	118%	127%

Table 3-10 Continued.

Stock	Year	Model Forecast	Agency Forecast	Postseason Return	Model Fcst/ Agency Fcst	Agency Fcst/ Postseason	Model Fcst/ Postseason
MCB[2] (Mid-Columbia Bright)	1999	37,997	38,300	50,800	99%	75%	75%
	2000	53,460	50,600	37,200	106%	136%	144%
	2001	45,055	43,500	76,600	104%	57%	59%
	2002	102,085	96,200	108,400	106%	89%	94%
	2003	126,698	104,800	150,300	121%	70%	84%
	2004	94,895	90,400	122,600	105%	74%	77%
	2005	93,837	89,400	97,900	105%	91%	96%
	2006	90,881	88,300	80,471	103%	110%	113%
	2007	77,470	68,000	47,575	114%	143%	163%
	2008	59,481	45,000	75,489	132%	60%	79%
	2009	87,172	94,400	73,069	92%	129%	119%
	2010	82,454	72,600	78,937	114%	92%	104%
	2011	98,442	100,000	87,263	98%	115%	113%
	2012	100,809	90,800		111%		
	AVG				108%	95%	102%
LRW[2] (Lewis River Wild)	1999	3,072	2,600	3,349	118%	78%	92%
	2000	4,053	3,500	10,234	116%	34%	40%
	2001	16,574	16,700	15,721	99%	106%	105%
	2002	18,910	18,200	24,948	104%	73%	76%
	2003	25,820	24,600	26,021	105%	95%	99%
	2004	24,590	24,100	22,327	102%	108%	110%
	2005	21,937	20,200	16,767	109%	120%	131%
	2006	19,826	16,600	17,896	119%	93%	111%
	2007	10,306	10,100	4,276	102%	236%	241%
	2008	4,479	3,800	7,120	118%	53%	63%
	2009	8,478	8,500	7,533	100%	113%	113%
	2010	11,034	9,700	10,862	114%	89%	102%
	2011	12,445	12,500	15,180	100%	82%	82%
	2012	17,806	16,200		110%		
	AVG				108%	99%	105%
ORC[1] (Oregon Coastal)	1999	65,338	72,084	84,293	91%	86%	78%
	2000	61,457	63,259	69,074	97%	92%	89%
	2001	58,062	66,412	132,732	87%	50%	44%
	2002	73,055	73,914	176,929	99%	42%	41%
	2003	101,310	85,483	174,091	119%	49%	58%
	2004	135,716	131,904	130,907	103%	101%	104%
	2005	133,886	167,213	167,682	80%	100%	80%
	2006	126,393	136,373	110,191	93%	124%	115%
	2007	108,338	131,195	47,012	83%	279%	230%
	2008	53,417	70,101	39,615	76%	177%	135%
	2009	32,253	48,072	41,800	67%	115%	77%
	2010	51,234	59,806	64,799	86%	92%	79%
	2011	67,203	78,199	87,646	86%	89%	77%
	2012	82,789	80,749		103%		
	AVG				91%	107%	93%

[1] Escapement, [2] Terminal Run; **Note that model forecasts are from separate yearly calibrations, not a time series from the recent calibration**

4 EVALUATION OF MARK-SELECTIVE FISHERIES

Chinook salmon released from Puget Sound hatcheries and spring-run hatchery Chinook salmon in the Columbia River have been mass-marked since brood 1998. Mass marking of Columbia River fall Chinook salmon started with brood year 2005 and for brood year 2009 onwards most of the Chinook salmon production intended for harvest released in Washington and Oregon has been mass marked (SFEC 2009). Mark selective fisheries (MSFs) have been in place in Puget Sound (including US Strait of Juan de Fuca) since 2003, on the Columbia River since 2001, and in BC Juan de Fuca since 2008 (Table 4-1). Additionally, the first ocean mark-selective Chinook fishery occurred off the Washington Coast (Areas 1-4) in 2010.

4.1 Catch in MSFs

MSFs have been in place in Puget Sound in Washington Areas 5 and 6, part of Puget Sound North Sport (PSN Sp) during the summer since 2003. In 2005 a winter MSF started in Washington Areas 8.1 and 8.2 (Puget Sound other sport, PSO S). In 2007, additional MSFs were implemented in Washington Areas 9, 10 and 11 (PSO S) in the summer months and in Areas 7 (PSN S), 9 and 10 (PSO S) in the winter months (Table 4-1 and Table 4-2). MSFs have continued to expand in Puget Sound marine areas to the extent that in 2010 all marine sport management areas have MSFs for at least some portion of the year. Total landed catch in MSFs in marine sport fisheries remained fairly constant from 2003 to 2005, around 3,000 to 4,000, but then increased in 2007 to about 25,000, while landed catch in non-selective fisheries ranged from 20,000 to 26,000 over the same period (Figure 4-1). Since 2007, catch in MSF fisheries in northern Puget Sound marine areas has nearly doubled, while MSF catches in other marine areas have remained about the same. MSFs have been implemented in freshwater areas (TERM S) since 2003 (Figure 4-1 and Table 4-3), with total estimated MSF catch ranging from 1,000 to 7,000. The percent of total MSF catch in the three PSC sport fisheries in Puget Sound (Figure 4-1) for 2009 is about 70% in PSN, 90% in PSO, and about 50% in freshwater (TERM S).

Chinook salmon MSFs have been in place in the Columbia and Willamette rivers since 2001 (Table 4-2). Most of the catch from MSFs has been directed on mass marked spring Chinook salmon from the Willamette, Cowlitz, Kalama, Lewis Rivers in the lower Columbia, tributaries in the upper Columbia upstream of Bonneville Dam, and in the Snake River (Table 4-2). MSFs on fall Chinook salmon were first implemented in the Lower Columbia tributaries in 2008 (Grays River only) and have expanded to the other streams with significant numbers of hatchery origin fish (e.g. Elochoman, Cowlitz, Toutle, Lewis, Kalama, Washougal, Wind, White Salmon rivers and Drano Lake). The fishery in the Cowlitz River in 2009 had a mixed-bag, partial MSF limit allowing one unmarked adult Chinook salmon. Total catch in these MSF fisheries is smaller than the catches from the mainstem Columbia River that has not been under MSF regulations during the fall season (Table 4-2).

A mixed-bag, partial MSF has occurred in the BC Juan de Fuca sport fishery since 2008. The fishery has a minimum size limit of 45 cm, with a daily bag limit of 2 Chinook salmon, however wild Chinook salmon exceeding a fork length of 67 cm must be released. This partial MSF has occurred in 2008-2010. The mixed-bag, partial MSF regulation is intended to protect Fraser River spring-run age 1.2 and age 1.3 stock groups as they returned to the Fraser River.

Table 4-1. Mark selective fisheries occurring from 2003-2010 (√). See SFEC (2012) for more detailed information on MSF proposals and fisheries.

Fishery	Location	Period	2003	2004	2005	2006	2007	2008	2009	2010
Sport	BC Strait of Juan de Fuca, selected subareas	March-April						√	√	√
Sport	WA/OR Ocean Area 1-4	June								√
Sport	WA PS Area 5	Summer	√	√	√	√	√	√	√	√
Sport	WA PS Area 6	Summer	√	√	√	√	√	√	√	√
Sport	WA PS Area 7	Winter						√	√	√
Sport	WA PS Area 8.1	Winter			√	√	√	√	√	√
Sport	WA PS Area 8.2	Winter			√	√	√	√	√	√
Sport	WA PS Area 9	Summer					√	√	√	√
Sport	WA PS Area 9	Winter						√	√	√
Sport	WA PS Area 10	Summer					√	√	√	√
Sport	WA PS Area 10	Winter						√	√	√
Sport	WA PS Area 11	Summer					√	√	√	√
Sport	WA PS Area 11	Winter							√	√
Sport	WA PS Area 12	Winter								√
Sport	WA PS Area 13	Summer					√	√	√	√
Sport	Nooksack	Sep-Dec		√	√	√	√	√	√	√
Sport	Skykomish	Jun-July	√	√	√	√	√	√	√	√
Sport	Carbon & Puyallup R	Aug-Dec	√	√	√	√	√	√	√	√
Sport	Upper Skagit	Jun-July			√	√	√	√	√	√
Sport	Nisqually	Jul-Jan				√	√	√	√	√
Sport	Skokomish	Aug-Dec								√
Sport	Quillayute	Feb-Dec	√	√	√	√	√	√	√	√
Sport	Hoh	May-Aug						√	√	√
Sport	Willapa Bay	Jul-Jan								√
Commercial	Willapa Bay	Aug-Nov								√
Sport	Columbia	Summer	√	√	√					√
Sport	Lower Columbia	Spring	√	√	√	√	√	√	√	√
Commercial (tangle net)	Lower Columbia	Spring	√	√	√	√	√	√	√	√
Commercial, (large net)	Lower Columbia	Spring	√	√	√	√	√	√	√	√
Sport	Willamette	Spring	√	√	√	√	√	√	√	√
Sport	Yakima R	Spring			√	√	√	√	√	√
Sport	Lower Snake	Fall						√	√	√
Sport	Oregon terminal	Spring						√	√	√

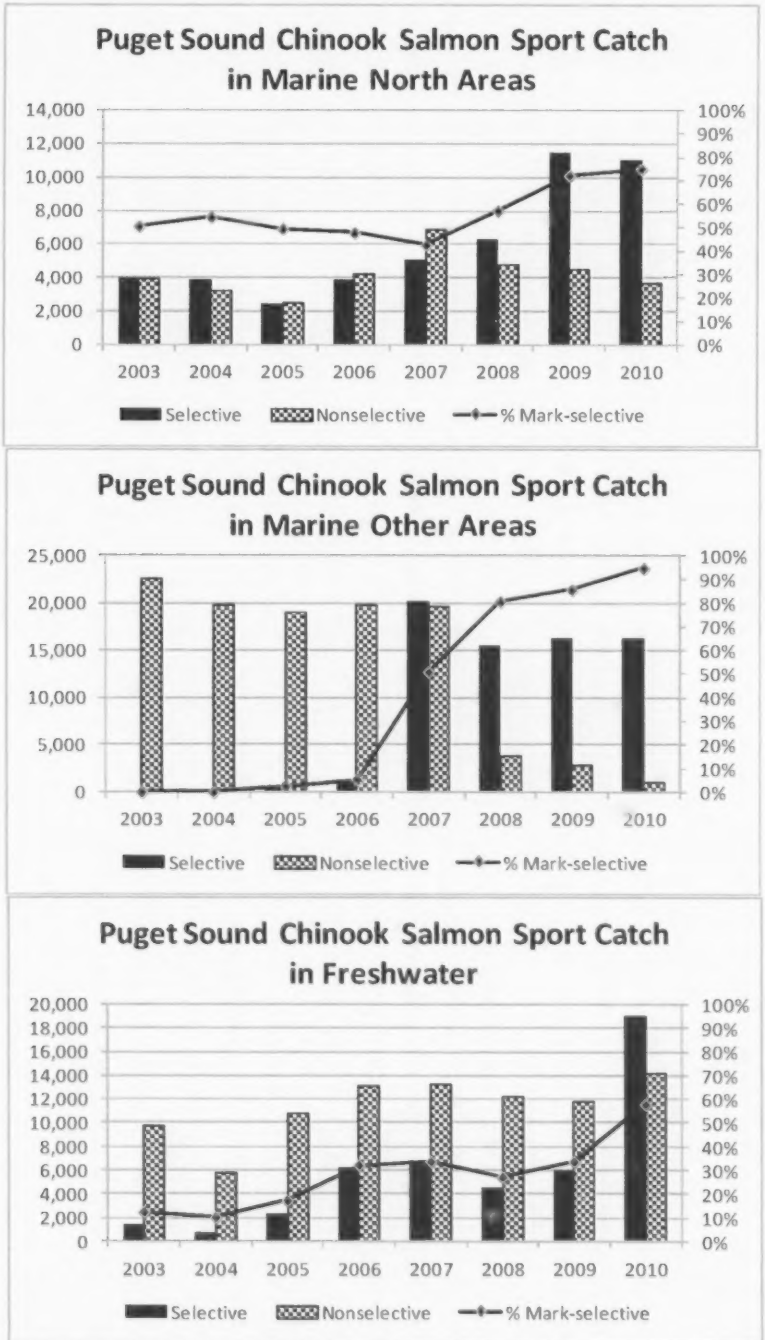

Figure 4-1. Estimated total number of Chinook salmon landed in Selective and Non-Selective fisheries (left y-axis) and % of catch in MSFs (right y-axis) in Puget Sound for catch years 2003-2010.

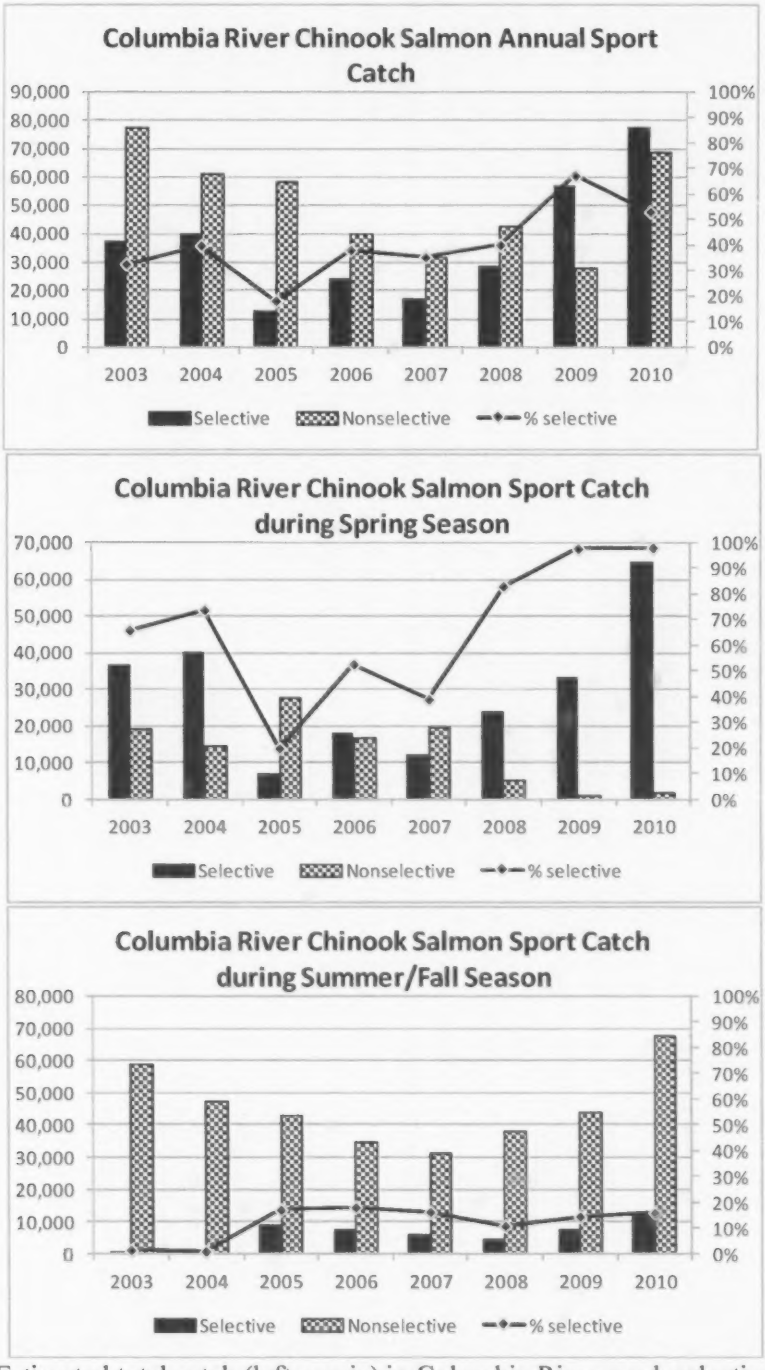

Figure 4-2. Estimated total catch (left y-axis) in Columbia River mark selective and non selective sport fisheries and catches during spring (May-June) and summer-fall seasons (Jul-Dec) and % of catch in MSFs (right y-axis) for catch years 2003-2010.

Table 4-2. Retained or landed catch and total encounters (landed+released) and total mortalities (landed+release mortalities) by size and mark category in MSFs for Puget Sound and Juan de Fuca marine sport fisheries (PSN, PSO, JDF) for 2003-2010 and the Washington-Oregon ocean sport fishery in 2010.

Fishery	Stat Area	Year	MSF period	Retained Marked Fish	Retained Unmarked fish	Encounters Marked	Encounters Unmarked	% Marked	Legal-sized Marked fish Landed & Release Mortalities	Legal-sized Unmarked fish Landed & Release Mortalities	Sub-Legal-sized Marked fish Landed & Release Mortalities	Sub-Legal-sized Unmarked fish Landed & Release Mortalities
BC Juan de Fuca (JDF)	Area 19,20	2008	Apr-May	122	51	122 [1]	68 [1]	64%	122 [2]	64 [2]	5 [2]	3 [2]
	Area 19,20	2009	Mar-May	152	26	152 [1]	105 [1]	59%	152 [2]	41 [2]	24 [2]	16 [2]
	Area 19,20	2010	Mar-June	827	347	827 [1]	704 [1]	54%	827 [2]	135	NA	NA
WA/OR Ocean	Area 1-4	2010	Jun	5,018	19	7,565	3,791	67%	5,123	384	252	164
PugetSound North (PSN) [3]	Area 5/6	2003	Jul-Aug	3,417	76	5,602	10,071	36%	3,287	783	567	1,055
	Area 5/6	2004	Jul-Aug	3,571	5	5,284	7,315	42%	3,475	730	438	495
	Area 5/6	2005	Jul-Aug	2,025	53	3,592	3,716	49%	1,982	354	356	321
	Area 5/6	2006	Jul-Aug	3,641	25	5,163	5,848	47%	3,546	553	399	456
	Area 5/6	2007	Jul-Aug	3,972	124	5,903	4,154	59%	3,795	467	564	317
	Area 5	2008	Jul	2,819	0	3,298	2,199	60%	2,856	280	58	66
	Area 5	2009	Jul-Aug	5,958	439	16,504	20,958	44%	4,988	1,009	3,079	3,223
	Area 5	2010	Jul-Aug	5,703	14	9,682	9,114	52%	5,624	758	875	828
	Area 6	2009	Jul-Aug	2,293	--	--	--	66%	--	--	--	--
	Area 6	2010	Jul-Aug	1,383	--	--	--	52%	--	--	--	--
	Area 7	2008	Feb	1,325	2	1,768	1,199	60%	1,341	158	72	31
	Area 7	2009	Feb-Apr	1,420	9	1,768	733	71%	1,448	115	42	3
	Area 7	2009-10	Dec-Apr	1,418	0	2,341	585	80%	1,442	66	161	29
Puget Sound Other (PSO) [3]	Area 8-1, 2	2005-06	Oct-Apr	1,112	40	3,732	2,298	62%	1,068	161	568	290
	Area 8-1, 2	2006-07	Oct-Apr	1,176	33	13,254	6,598	67%	1,075	72	2,517	1,260
	Area 8-1, 2	2007-08	Nov-Apr	1,543	23	4,040	1,388	74%	1,475	92	568	179
	Area 8-1,2	2009	Jan-Apr	911	27	4,044	1,468	73%	917	24	621	287
	Area 8-1,2	2009-10	Nov-Apr	1,109	4	3,166	969	77%	1,120	36	400	151
	Area 9	2007	Jul	5,239	33	7,236	1,461	83%	5,236	180	403	83
	Area 9	2008	Jan-Apr	1,405	3	2,889	682	81%	1,372	49	330	75
	Area 9	2008	Jul-Aug	4,045	3	7,854	5,436	59%	4,154	244	653	765
	Area 9	2008-09	Nov, Jan-Apr	885	14	4,537	3,009	60%	897	37	718	567
	Area 9	2009	Jul-Aug	3,229	20	11,946	4,196	74%	3,182	210	1,790	581
	Area 9	2009-10	Nov-Apr	1,557	27	4,230	1,097	79%	1,494	76	598	146
	Area 9	2010	Jul-Aug	5,292	39	6,782	2,413	74%	5,430	352	159	55
	Area 10	2007	Jul	1,539	38	4,849	1,258	79%	1,511	105	690	152
	Area 10	2007-08	Dec-Jan	635	21	2,575	545	83%	555	45	468	72
	Area 10	2008	Jul-Aug	1,031	3	1,348	898	60%	1,053	79	42	77

Fishery	Stat Area	Year	MSF period	Retained Marked Fish	Retained Unmarked fish	Encounters Marked	Encounters Unmarked	% Marked	Legal-sized Marked fish Landed & Release Mortalities	Legal-sized Unmarked fish Landed & Release Mortalities	Sub-Legal-sized Marked fish Landed & Release Mortalities	Sub-Legal-sized Unmarked fish Landed & Release Mortalities
Puget Sound Other (PSO)[3]	Area 10	2008-09	Dec-Jan	251	0	1,302	498	72%	255	5	207	92
	Area 10	2009	Jul-Aug	1,621	22	4,329	1,121	79%	1,549	34	613	203
	Area 10	2009-10	Oct-Jan	395	3	2,979	984	75%	364	15	548	180
	Area 10	2010	Jul-Aug	2,988	42	4,444	2,734	62%	3,037	187	242	342
	Area 11	2007	Jun-Sep	10,546	95	20,090	5,468	79%	10,494	527	1,960	493
	Area 11	2008	Jun-Sep	7,377	23	10,434	2,270	82%	7,495	318	494	54
	Area 11	2009	Jun-Sep	3,277	37	7,582	4,623	62%	3,254	211	884	680
	Area 11	2010	Feb-Apr	326	3	487	93	84%	325	15	33	2
	Area 11	2010	Jun-Sep	3,910	64	5,390	1,575	77%	3,999	230	207	81
	Area 12	2010	Feb-Apr	300	--	--	--	50%	--	--	--	--
	Area 13	2009	May-Sep	1,340	--	--	--	86%	--	--	--	--
	Area 13	2010	May-Sep	668	--	--	--	82%	--	--	--	--

[1]Legal sized Chinook salmon
[2]IM and drop-off rates same as used in CTC Catch & Escapement report: drop-off (6.9) and IM release rate (12.3).
[3]Estimates for Puget Sound North and Puget Sound Other fisheries were updated with creel values from the WA State-Tribal Recreational Angling Impacts Database (Sept. 2012), with the exception of Area 6 in 2009 and 2010 and Areas 12 and 13 in all years (these are based on draft WDFW Catch Record Card estimates).

Table 4-3. MSFs in Puget Sound TERM Sport for Chinook salmon 2003-2010. Catches of marked fish are reported where available for the calendar year; either from PSMFC catch sample database (a), preliminary catch record card estimates (b) or creel survey estimates (c). Fishery and years that were sampled are indicated by an (s).

Fishery	Location	2003	2004	2005	2006	2007	2008	2009	2010
Sport	Nooksack River	--	5[b]	186[b]	119[b]	162[b]	14[b]	42[b]	56[b]
Sport	Skykomish River	177[b]	85[b]	76[b]	78[b]	6[25b]	432[b]	227[b]	238[b]
Sport	Carbon & Puyallup River	1,287[a,s]	1,019[a,s]	1,590[a,s]	1,736[a,s]	2,525[a,s]	1,665[b]	2,919[b]	509[b]
Sport	Upper Skagit &Cascade River	--	--	173[a,s]	458[a,s]	724[a,s]	277[b]	343[b]	250[b]
Sport	Nisqually River	--	--	--	3,711[b]	4,302[b]	2,132[b]	2,789[b]	2,728[b]
Sport	Skokomish	--	--	--	--	--	--	--	6,243[b]

4.2 Size of MSFs

The size of a MSF relative to the total exploitation of a stock can be measured using the percentage of the total landed catch in net, sport and troll fisheries of tagged and marked PSC indicator stocks that is in MSFs (Table 4-4). MSFs were first implemented in Puget Sound and

on spring stocks in the Columbia River. In Puget Sound a MSF occurred in the summer of 2003 in the Strait of Juan de Fuca and by 2010 has expanded to all areas in Puget Sound with the exception of Hood Canal (Table 4-2). In 2008, MSFs were implemented in the Columbia River on fall Chinook salmon, in BC in the Strait of Juan de Fuca, and in terminal areas of the Oregon coast. The percentage of the total landed tagged and marked catch that occurs in MSFs increased over this period for stocks in Puget Sound (Figure 4-3) and in 2010 the average was 27.7% and ranged from 1.8 to 69.4% (Table 4-4).

4.3 Impact of MSFs on unmarked Chinook salmon.

PSC indicator stocks that have been double index tagged (DIT) can be used to evaluate the impact of MSFs on the unmarked stocks represented by the unmarked tag group in a DIT pair[1]. The ratio of unmarked to marked fish (λ) for a DIT group provides a relationship between the two tag groups and a measure to evaluate the impact of MSFs on the DIT stock: a comparison of the ratios of unmarked to marked at release and at escapement can be used in a test of the null hypothesis of no difference in proportional return of marked and unmarked groups. A positive test statistic occurs when a higher proportion of unmarked fish occur in the escapement and this is consistent with the harvest of marked fish through mark-selective fisheries. A negative test statistic occurs when a higher proportion of marked fish return, which could be indicative of sampling problems in the hatchery (i.e., the sampling procedure fails to detect all CWTs from unmarked fish present in the sample), or incorrect assumptions about release mortality rates, multiple encounters, or mark recognition errors. This is a concern when patterns occur over many brood years for a stock or hatchery. If stock-specific MSF impacts are small, then random variation in the CWT sampling procedures or simply random variability in processes, like survival, could result in both positive and negative test statistics in a random pattern across broods.

The comparison of proportion marked and unmarked DIT groups returning were not significant for brood years before 2002 for Puget Sound stocks (Table 4-5). This result is expected as MSFs did not start until 2003. In contrast, significant test statistics were observed for brood years before 2002 for the Fraser River-origin stock (Chilliwack River, Table 4-5). The test statistic was negative for brood year 1998 but positive for the next brood year (1999). These results are inconsistent with expectations and will be examined further. For Puget Sound DIT stocks, Skagit springs (SKS), Skykomish (SKY), Green River (SPS) and Nisqually (NIS) show significant differences in four or more years. All these Puget Sound DIT stocks except the Green River are subject to terminal sport MSFs which target the hatchery production including the DIT returns. In comparison, the Chilliwack River stock is only subject to preterminal MSFs in US marine areas around Puget Sound and in US and Canadian MSFs in Juan de Fuca Strait. There are no terminal MSFs targeting this stock in Canadian marine or freshwater areas, and this stock is not mass marked.

The ratio of the return proportions between the unmarked and marked tagged groups, or the odds

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[1] A DIT group consists of at least two tag groups, one with the mass mark (or adipose fin clip) and one without the mark. These two tag groups are treated identically except for the mark and differences in mortality should be due to the MSFs, assuming there is no mark mortality occurring prior to recruitment to the fisheries.

ratio, $\frac{\lambda^{unmarked}}{\lambda^{marked}}$ (Agresti 1984), are methods to statistically compare the DIT groups, where an odds ratio of one indicates that the ratio did not change from release to escapement while an odds ratio larger than one indicates a higher removal of marked fish compared to the DIT unmarked fish, which is assumed to be due to MSFs. When releases and recoveries are summed over all Puget Sound DIT stocks the odds ratio is significantly larger than one for brood years 2001-2007 (Figure 4-4) which all have at least 2 ages returning in years with MSFs. For the Fraser River origin Chilliwack River stock, the 95% confidence intervals for the odds ratio includes the value one in most years (Figure 4-5)), which indicates a lack of a detectable MSF impact for these brood years.

Among the DIT stocks examined in Table 4-2, MSF impacts have been statistically identified more often for recent brood years, except for brood year 2008 from which only age-2 fish had matured at the time of analysis (Figure 4-6). The temporal pattern of the odds ratio for the Puget Sound stocks (Figure 4-4) shows that unmarked fish have returned at higher rates than marked fish over the recent time series, presumably due to MSF impacts. However the odds ratio time series for the Chilliwack River appears different and is generally centered around an odds ratio of one (Figure 4-5). The different patterns between the Puget Sound and Chilliwack stocks may arise from different stock distributions and thus vulnerabilities to MSFs, or other mechanisms.

Table 4-4 Estimated landed catch of tagged and marked PSC Chinook Indicator Stocks in BC, Washington and Oregon in all net, troll and sport fisheries for catch years 2003-2009 and % of total tagged and marked catch that was landed in MSFs.

		2003		2004		2005		2006		2007		2008		2009		2010	
Region	Stock	Total	% MSF	Total	% MSF	Total	% MSF	Total	% MSF	Total	% MSF	Total	% MSF	Total	% MSF	Total	% MSF
AK	Alaska Spr	971		1,472		3,675		4,457		3,922		3,251		959		686	
	Alaska Neets Bay	401		598		653		392		626		392		1,059		615	
	Alaska Deer Mountain	130		136		184		58		48		86		55		68	
	Alaska Herring Cove	848		1,084		1,291		646		533		473		791		756	
	Chilkat Spr	33		86		45		27		34		42		32		58	
	Taku Spr	36		220		438		202		45		58		71		17	
	Unuk Spr	129		143		231		173		149		68		79		108	
BC	Atnarko Summer	149		160		311		299		91		2		322		229	
	Big Qualicum	90		113		221		145		213		146	9.6%	162	2.4%	159	
	Chehalis (Harrison Fall)	138	3.4%	293	3.0%	260		226		79	2.3%	1,486	1.5%	812	11.1%	1,735	9.2%
	Chilliwack (Harrison Fall)	1,271	1.6%	1,420	1.5%	1,198	0.9%	592	0.7%	366	2.3%	1,031	4.4%	601	5.4%	1,423	7.0%
	Cowichan Fall	230	1.1%	274	0.6%	185	2.0%	174		49		136		280		483	4.1%
	Dome Creek Spr	126		1		147		14		10		67		6			
	Kitsumkalum Summer	199		568		434		304		465		765		412		382	
	Nanaimo River Fall	262	2.8%	253		141	2.6%	49		439		44		6			
	Nicola River Spr	240		138		101		69		43		68		88	4.1%	199	5.3%
	Puntledge Summer	21		26		78		44		60		50		116		121	
	Quinsam Fall	204		314		392		282		266		101		150		185	
	Robertson Creek	1,160		2,595		2,297		1,750		1,637		832		779		360	
	Lower Shuswap River	630		606		457		715		128		569		693	0.5%	849	
WA PS	George Ad Fall Fingerl	542	2.2%	626	5.9%	882	5.6%	548	3.9%	899	9.6%	469	15.1%	557	25.7%	1,109	28.7%
	Green River Fall Fingerl	459	5.7%	467	3.0%	305	2.5%	661	3.0%	891	6.3%	727	14.3%	644	10.8%	292	23.4%
	Grovers Cr Fall Fingerl	786	7.0%	734	4.3%	732	3.2%	878	5.7%	833	16.3%	376	34.5%	574	24.1%	637	36.9%
	Nisqually Fall Fingerl	1,149	2.4%	914	1.0%	441	2.5%	1,830	2.2%	1,899	10.5%	735	12.9%	885	14.1%	1,070	22.8%
	Nooksack Spr Fingerl	219		449		368	2.0%	326	2.0%	291	2.1%	637	6.2%	310	8.0%	413	6.2%
	Samish Fall Fingerl	519	0.5%	352	1.3%	523	4.0%	1,306	1.9%	1,400	2.8%	1,238	10.3%	873	10.8%	1,193	10.3%

Region	Stock	2003		2004		2005		2006		2007		2008		2009		2010	
		Total	% MSF	Total	% MSF	Total	% MSF	Total	% MSF	Total	% MSF	Total	% MSF	Total	% MSF	Total	% MSF
WA PS (cont)	Skagit Spr Fingerl	224	1.1%	348	1.3%	402	11.3%	729	47.9%	1,253	40.2%	745	36.4%	491	30.6%	688	34.0%
	Skagit Spr Yearl	436	1.7%	442	1.4%	470	19.0%	459	56.6%	467	52.2%	392	50.9%	213	34.1%	259	55.3%
	Skagit Sum Fingerl	315	0.8%	184	2.3%	310	2.1%	292	2.7%	398		453	2.5%	496	4.3%	214	1.8%
	Skykomish Fall Fingerl	84	5.6%	234	5.8%	202	1.8%	272	9.0%	429	3.6%	150	20.8%	88	40.0%	74	29.3%
	South Puget S Fall Yearl	5		21		226	7.0%	208	5.2%	234	21.6%	63	42.4%	119	57.4%	68	69.4%
	Stillaguamish Fall Fingerl	6				121	4.6%	158	3.2%	326	0.5%	376	19.8%	260	14.8%	359	13.8%
WA CST	Hoko Fall Fingerl	219		279	1.5%	234	2.0%	231	1.6%	271	1.5%	127		85	4.5%	81	
	Queets Fall Fingerl	931		1,256		1,313		692		488		511		911		1,103	
	Sooes Fall Fingerl	357	1.3%	362	1.2%	344		161	2.3%	37		51		157		104	7.5%
COLR	Cowlitz Fall Tule	304		116	3.6%	94		54		50		63	4.7%	127	5.7%	216	4.6%
	Hanford Wild	641		865		359		325		191		141		200		242	
	Columbia LR Hat	1,072	1.3%	912	0.2%	353		45		40		228		335	8.0%	1,047	4.1%
	Lewis River Wild	209	4.9%	349		198		352		112		41		81		51	
	Lyons Ferry	117		190	1.7%	145	5.1%	116		248		1,334	0.2%	1,138	0.3%	1,550	5.4%
	Spr Creek Tule	3,291	0.4%	3,063	0.6%	1,407		472	1.4%	572	1.5%	1,454	2.1%	1,268	5.0%	2,607	2.1%
	Columbia Hat	4,278	0.3%	3,869	0.4%	4,218		2,558	1.1%	2,255	0.2%	882	0.3%	513	2.4%	728	0.5%
	Upriver Brights	1,053		997	0.7%	1,486		931	0.4%	329		419		746	1.5%	670	
	Willamette Spr	1,697	28.7%	2,559	55.9%	943	29.7%	802	42.1%	467	56.4%	861	32.1%	1,395	52.4%	4,145	62.5%
OR CST	Elk River	2,814		2,783		1,368		1,408		1,321		1,424		990	0.4%	956	0.4%
	Salmon River	2,736		2,892		3,144		1,438		865		766		1,365		1,467	

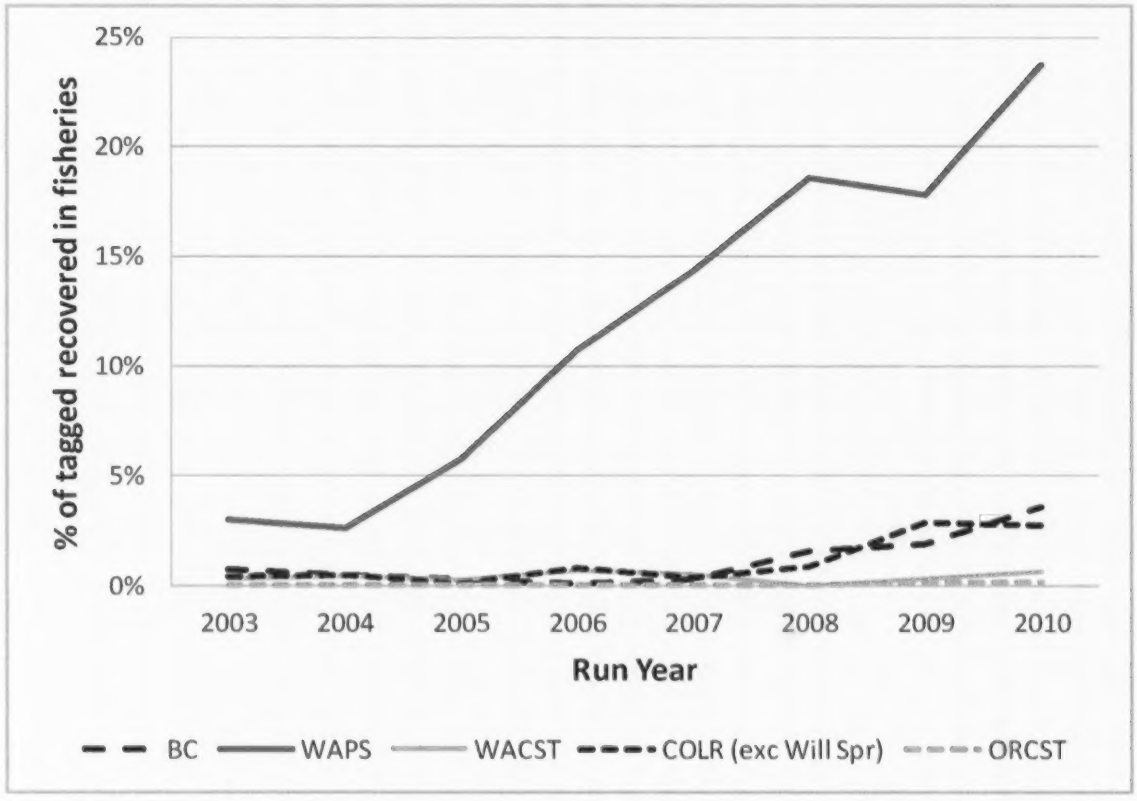

Figure 4-3. Percent of total fishery CWT recoveries in MSFs for run years 2003-2010 for Chinook salmon indicator stocks, by region of origin (British Columbia [BC], Columbia River excluding Willamette Spring [COLR], Oregon Coast [ORCST], Washington Coast [WACST], and Puget Sound [WAPS]).

Table 4-5. Results for hypothesis test (Ho: No difference in proportion marked and unmarked DIT groups returning to hatchery) for stocks and brood years where test was significant. Z-statistics in parentheses are negative, indicating that return proportion was greater for marked groups than for unmarked groups.

Stock	Brood Year	Significant?	Unmarked Return	Unmarked Release	Unmarked Prop. Ret	Marked Return	Marked Release	Marked Prop. Ret.	λ rel	λ esc	Z-statistic for H(o) of no impact	p(0.05)	Oldest age in brood
CHI	1998	Y	145	98,926	0.0015	301	98,095	0.0031	1.008	0.481	(7.441)	0.000	5
	1999	Y	403	96,193	0.0042	347	97,903	0.0035	0.983	1.161	2.287	0.022	5
	2000		170	100,056	0.0017	168	99,766	0.0017	1.003	1.011	0.078	0.938	5
	2001		230	97,227	0.0024	260	99,171	0.0026	0.980	0.885	(1.126)	0.260	5
	2002	Y	182	99,657	0.0018	232	100,036	0.0023	0.996	0.783	(2.437)	0.015	5
	2003		215	48,344	0.0044	239	48,242	0.0049	1.002	0.900	(1.145)	0.252	5
	2004		126	100,557	0.0013	154	100,023	0.0015	1.005	0.823	(1.669)	0.095	5
	2005	Y	1,116	89,159	0.0125	984	87,801	0.0112	1.015	1.135	2.550	0.011	5
	2006		109	96,305	0.0011	86	95,382	0.0009	1.010	1.267	1.576	0.115	4
	2007		866	99,632	0.0087	871	99,465	0.0088	1.002	0.994	(0.155)	0.877	3
	2008		175	99,944	0.0018	168	99,451	0.0017	1.005	1.042	0.334	0.738	2
GAD	1998		7	224,228	0.0000	15	223,343	0.0001	1.004	0.467	(1.714)	0.087	5
	1999		277	218,728	0.0013	232	208,330	0.0011	1.050	1.194	1.450	0.147	5
	2000		471	225,071	0.0021	445	223,009	0.0020	1.009	1.059	0.722	0.470	5
	2001		493	210,039	0.0023	509	223,933	0.0023	0.938	0.968	0.501	0.617	5
	2002		912	208,727	0.0044	859	209,531	0.0041	0.996	1.062	1.326	0.185	5
	2003	Y	601	223,637	0.0027	508	224,905	0.0023	0.994	1.182	2.789	0.005	5
	2004		307	223,927	0.0014	280	224,882	0.0012	0.996	1.099	1.161	0.246	5
	2005	Y	1,412	225,257	0.0063	1,224	225,216	0.0054	1.000	1.154	3.538	0.000	5
	2006		476	225,937	0.0021	418	215,124	0.0019	1.050	1.140	1.196	0.232	4
	2007	Y	1,252	221,008	0.0057	1,005	219,881	0.0046	1.005	1.245	5.020	0.000	3
	2008		96	225,942	0.0004	96	226,985	0.0004	0.995	1.000	0.031	0.975	2
GRN	1998		30	197,824	0.0002	27	188,118	0.0001	1.052	1.120	0.229	0.819	5
	1999		192	197,889	0.0010	186	193,300	0.0010	1.024	1.031	0.071	0.943	5
	2000		214	202,658	0.0011	191	194,248	0.0010	1.043	1.116	0.675	0.499	5
	2001	Y	108	162,160	0.0007	88	178,119	0.0005	0.910	1.230	2.076	0.038	5
	2002	Y	493	198,321	0.0025	550	192,443	0.0029	1.031	0.896	(2.256)	0.024	5
	2003		282	197,541	0.0014	246	197,726	0.0012	0.999	1.143	1.538	0.124	5
	2004	Y	578	204,269	0.0028	507	204,698	0.0025	0.998	1.138	2.144	0.032	5
	2005	Y	948	198,542	0.0048	823	196,353	0.0042	1.011	1.152	2.701	0.007	5

Table 4-5. Results for hypothesis test (Ho: No difference in proportion marked and unmarked DIT groups returning to hatchery) for stocks and brood years where test was significant. Z-statistics in parentheses are negative, indicating that return proportion was greater for marked groups than for unmarked groups.

Stock	Brood Year	Significant?	Unmarked Return	Unmarked Release	Unmarked Prop. Ret	Marked Return	Marked Release	Marked Prop. Ret.	λ rel	λ esc	Z-statistic for H(o) of no impact	p(0.05)	Oldest age in brood
GRN	2006	Y	426	204,385	0.0021	364	204,795	0.0018	0.998	1.170	2.191	0.028	4
cont.	2007	Y	478	202,635	0.0024	416	202,671	0.0021	1.000	1.149	2.033	0.042	3
	2008		4	212,303	0.0000	10	201,409	0.0001	1.054	0.393	(1.707)	0.088	2
GRO	1999		565	180,536	0.0031	523	181,132	0.0029	0.997	1.081	1.330	0.184	5
	2000		633	206,563	0.0031	602	203,754	0.0030	1.014	1.051	0.629	0.530	5
	2001		532	203,840	0.0026	486	203,509	0.0024	1.002	1.094	1.412	0.158	5
	2002		875	194,233	0.0045	851	198,987	0.0043	0.976	1.029	1.099	0.272	5
	2003	Y	1,431	151,492	0.0094	1,348	163,799	0.0082	0.925	1.062	3.649	0.000	5
	2004	Y	1,133	133,455	0.0085	872	118,197	0.0074	1.129	1.299	3.063	0.002	5
	2005	Y	1,136	169,954	0.0067	1,084	136,519	0.0079	1.245	1.048	(3.739)	0.000	5
	2006		873	185,397	0.0047	861	185,975	0.0046	0.997	1.013	0.314	0.754	4
	2007		1,207	199,622	0.0060	1,247	199,251	0.0063	1.002	0.967	(0.818)	0.414	3
	2008		42	200,006	0.0002	33	186,978	0.0002	1.070	1.276	0.735	0.462	2
NIS	1998		8	192,165	0.0000	11	202,103	0.0001	0.951	0.725	(0.588)	0.556	5
	1999		213	194,985	0.0011	217	199,030	0.0011	0.980	0.981	0.016	0.987	5
	2000		492	174,625	0.0028	479	169,143	0.0028	1.032	1.027	(0.077)	0.938	5
	2001		402	214,059	0.0019	367	214,490	0.0017	0.998	1.094	1.249	0.212	5
	2002	Y	1,071	192,248	0.0056	808	180,294	0.0045	1.066	1.326	4.632	0.000	5
	2003	Y	1,235	203,624	0.0061	1,096	207,975	0.0053	0.979	1.127	3.300	0.001	5
	2004	Y	1,102	209,905	0.0053	924	208,724	0.0044	1.006	1.193	3.708	0.000	5
	2005	Y	675	127,293	0.0053	512	120,154	0.0043	1.059	1.319	3.610	0.000	5
	2006	Y	445	185,397	0.0024	350	185,975	0.0019	0.997	1.271	3.067	0.002	4
	2007	Y	1,061	179,625	0.0059	935	180,974	0.0052	0.993	1.135	2.732	0.006	3
	2008		77	206,098	0.0004	82	206,480	0.0004	0.998	0.940	(0.339)	0.735	2
NSF	1998		50	168,574	0.0003	43	167,136	0.0003	1.009	1.154	0.333	0.739	5
	1999	Y	182	200,294	0.0009	268	198,085	0.0014	1.011	0.678	(2.186)	0.029	5
	2000		205	199,511	0.0010	189	197,364	0.0010	1.011	1.087	0.448	0.654	5
	2001		60	99,062	0.0006	76	98,711	0.0008	1.004	0.794	(1.302)	0.193	5
	2001	Y	328	98,860	0.0033	395	97,528	0.0040	1.014	0.832	(2.565)	0.010	5
	2002		24	206,479	0.0001	27	203,675	0.0001	1.014	0.889	(0.468)	0.640	5

Table 4-5. Results for hypothesis test (Ho: No difference in proportion marked and unmarked DIT groups returning to hatchery) for stocks and brood years where test was significant. Z-statistics in parentheses are negative, indicating that return proportion was greater for marked groups than for unmarked groups.

Stock	Brood Year	Significant?	Unmarked Return	Unmarked Release	Unmarked Prop. Ret	Marked Return	Marked Release	Marked Prop. Ret.	λ rel	λ esc	Z-statistic for H(o) of no impact	p(0.05)	Oldest age in brood
NSF	2003		79	198,270	0.0004	76	202,184	0.0004	0.981	1.041	0.370	0.712	5
cont.	2004		46	185,400	0.0002	30	179,380	0.0002	1.034	1.552	1.726	0.084	5
	2005		228	204,021	0.0011	210	203,918	0.0010	1.001	1.082	0.809	0.419	5
	2006		41	134,773	0.0003	27	143,841	0.0002	0.937	1.513	1.937	0.053	4
	2007		150	206,670	0.0007	121	206,867	0.0006	0.999	1.240	1.771	0.076	3
	2008		11	175,656	0.0001	9	171,083	0.0001	1.027	1.222	0.389	0.697	2
SAM	1998		28	198,241	0.0001	31	196,029	0.0002	1.011	0.900	(0.254)	0.800	5
	1999		182	177,940	0.0010	181	168,423	0.0011	1.057	1.007	(0.262)	0.793	5
	2000	Y	65	149,187	0.0004	103	146,129	0.0007	1.021	0.630	(2.161)	0.031	5
	2001	Y	176	169,452	0.0010	96	173,971	0.0006	0.974	1.839	2.704	0.007	5
	2002		137	199,133	0.0007	135	197,111	0.0007	1.010	1.014	0.023	0.982	5
	2003		330	195,566	0.0017	331	200,153	0.0017	0.977	0.997	0.201	0.841	5
	2004		189	201,803	0.0009	209	196,576	0.0011	1.027	0.904	(0.939)	0.348	5
	2005		802	182,920	0.0044	778	201,655	0.0039	0.907	1.031	1.648	0.099	5
	2006		270	205,708	0.0013	223	206,496	0.0011	0.996	1.209	1.374	0.169	4
	2007		708	216,849	0.0033	609	211,571	0.0029	1.025	1.163	0.977	0.329	3
	2008		17	201,990	0.0001	17	201,764	0.0001	1.001	1.000	(0.003)	0.997	2
SKS	1998		2	67,098	0.0000	2	65,619	0.0000	1.023	1.000	(0.022)	0.982	5
	1999		757	72,629	0.0104	738	71,246	0.0104	1.019	1.026	0.125	0.900	5
	2000		780	73,356	0.0106	778	74,091	0.0105	0.990	1.003	0.249	0.804	5
	2001		649	72,996	0.0089	620	76,520	0.0081	0.954	1.047	1.664	0.096	5
	2002	Y	561	60,000	0.0094	436	59,777	0.0073	1.004	1.287	3.918	0.000	5
	2003	Y	338	75,418	0.0045	242	74,590	0.0032	1.011	1.398	3.866	0.000	5
	2004	Y	718	71,942	0.0100	465	73,668	0.0063	0.977	1.543	7.711	0.000	5
	2005	Y	121	74,467	0.0016	88	74,633	0.0012	0.998	1.377	2.298	0.022	5
	2006		200	66,540	0.0030	177	70,079	0.0025	0.949	1.131	1.691	0.091	4
	2007		44	58,614	0.0008	32	58,502	0.0006	1.002	1.378	1.377	0.168	3
	2008		24	75,683	0.0003	22	76,752	0.0003	0.986	1.091	0.342	0.732	2
SKY	2000		387	209,520	0.0018	357	205,008	0.0017	1.022	1.085	0.752	0.452	5
	2001		243	197,946	0.0012	245	196,023	0.0012	1.010	0.994	(0.173)	0.863	5

Table 4-5. Results for hypothesis test (Ho: No difference in proportion marked and unmarked DIT groups returning to hatchery) for stocks and brood years where test was significant. Z-statistics in parentheses are negative, indicating that return proportion was greater for marked groups than for unmarked groups.

Stock	Brood Year	Significant?	Unmarked Return	Unmarked Release	Unmarked Prop. Ret	Marked Return	Marked Release	Marked Prop. Ret.	λ rel	λ esc	Z-statistic for H(o) of no impact	p(0.05)	Oldest age in brood
SKY	2002	Y	408	197,105	0.0021	325	195,075	0.0017	1.010	1.255	2.830	0.005	5
cont.	2003	Y	469	173,116	0.0027	416	176,427	0.0024	0.981	1.128	1.992	0.046	5
	2004	Y	966	199,529	0.0048	814	200,398	0.0041	0.996	1.186	3.513	0.000	5
	2005		239	206,091	0.0012	204	204,637	0.0010	1.007	1.174	1.538	0.124	5
	2006		291	206,362	0.0014	283	205,344	0.0014	1.005	1.028	0.258	0.796	4
	2007	Y	101	199,678	0.0005	60	199,858	0.0003	0.999	1.677	3.104	0.002	3
	2008		13	202,000	0.0001	15	201,196	0.0001	1.004	0.856	(0.405)	0.686	2

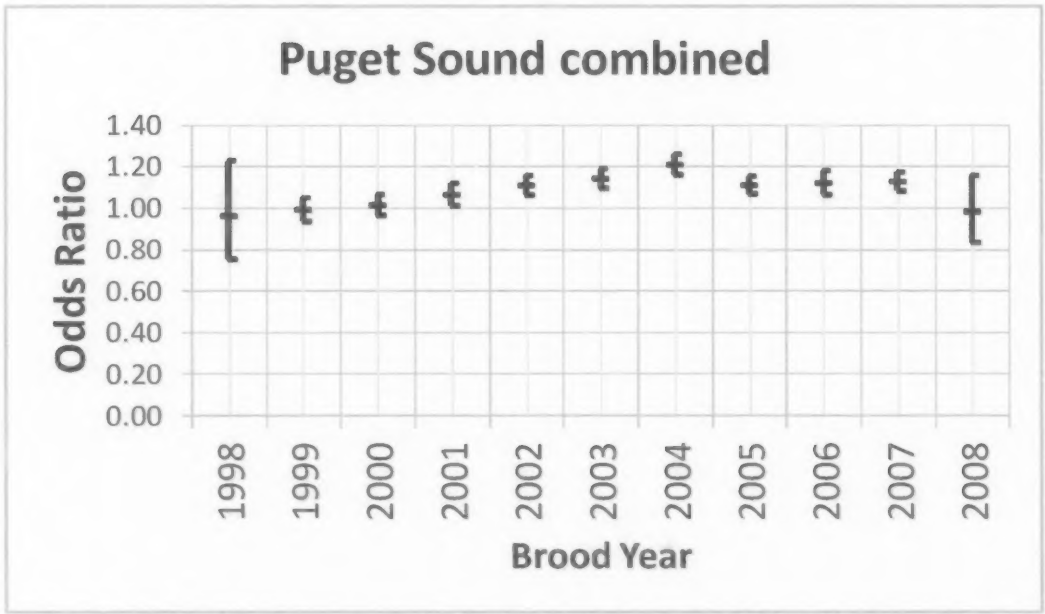

Figure 4-4. Estimated odds ratios (+/- 95% CI) for Puget Sound Chinook salmon DIT stocks combined. Note: 2001 is the first brood year for which all ages were exposed to MSFs; recoveries for the most recent brood year are for age-2 fish only.

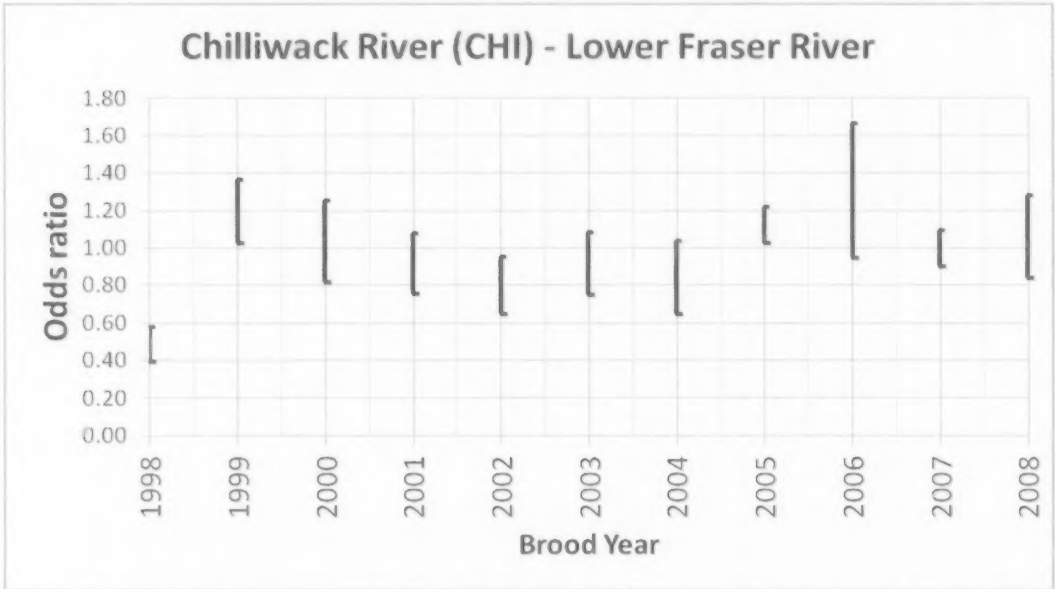

Figure 4-5. Estimated odds ratios (+/- 95% CI) for the Chilliwack River DIT stock originating from the lower Fraser River. Note: 2001 is the first brood year for which all ages were exposed to MSFs; recoveries for the most recent brood year are for age-2 fish only.

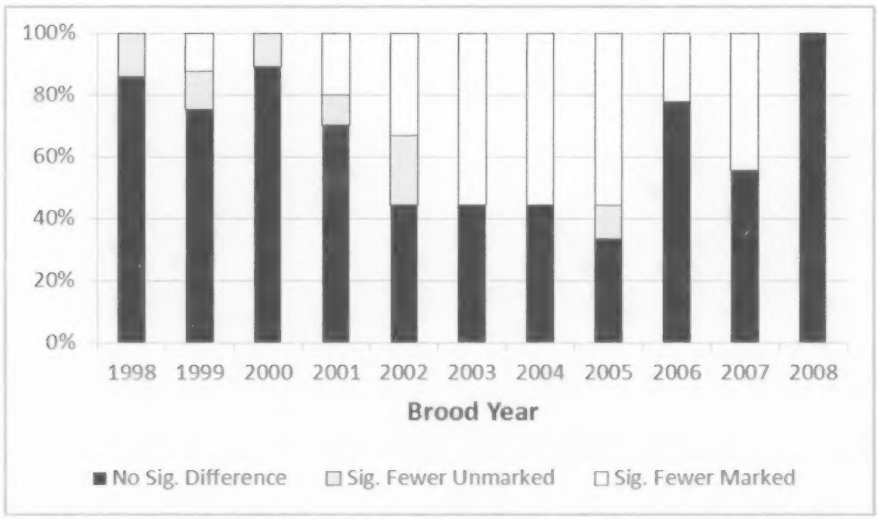

Figure 4-6. The percentage of DIT stock statistical test results reported in Table 4-5 that compare the lambdas at release and escapement by brood year. Test results were grouped as showing no significant difference, significantly fewer marked fish returning, or significantly fewer unmarked fish returning. Note: 2001 is the first brood year for which all ages were exposed to MSFs; recoveries for brood year 2008 are for age-2 fish only.

5 PROGRESS REPORT ON IMPROVEMENTS TO THE COASTWIDE CWT PROGRAM

The CWT Improvement Program is a new activity identified in the 2008 Agreement. The objective is to implement over a five-year period, beginning no later than 2010, critical improvements to the coast-wide CWT programs operated by the Parties' respective management agencies. The bilateral CWT Improvement Team (CWTIT) was established on November 13, 2009, per the Terms of Reference from the PSC entitled Pacific Salmon Commission: Bilateral Approach to Implementation of Improvements to the Coast-wide Coded Wire Tagging (CWT) Program. The CWTIT is tasked with making recommendations regarding projects to improve the CWT system, including CWT reporting systems, data quality, tagging levels, sampling levels, and the precision and accuracy of statistics such as abundance, exploitation rates, survival estimates, etc. for Chinook salmon. Canada implemented the program in 2009 and the U.S. in 2010 due to differences in the timing of fiscal years. The results for past funding (2009, 2010) funding for Canada are reported in CTC (2011, 2012). In this report, the results of projects funded for 2011 are reported along with a list of projects approved for 2012.

5.1 Canadian CWTIT Projects

5.1.1 Progress on Canadian Projects Undertaken in 2011

A total of 20 Canadian projects in nine project categories were funded in FY 2011, representing a total expenditure of $1,500,000. These projects are described below. Each project description includes the CWT issue listed in the PSC CWT Workgroup Tech Report 25 (Table 5-3, PSC 2008) that the program is intended to address

1) Increased CWT Marking Indicators
(2009: $842,000 including $650,000 tags purchased for 5 years, 2010: $465,000 including $143,000 tag purchase, 2011: $345,000)
TR 25 Issue (Primary): 2

Application of CWTs was increased at four indicator stocks in 2009, 12 stocks in 2010 and 2011. In 2009 additional staff were trained and equipment was purchased so that all hatcheries were able to carry out the increased tagging in 2010-2011. Production was also increased at Shuswap and Spius hatcheries. In 2010 the planned incremental tag application was achieved at all facilities except the Cowichan Hatchery. Due to very poor escapement and broodstock availability, Cowichan Hatchery released only 250,000 of the total 400,000 planned incremental tagged Chinook. Production targets have been met at all facilities in 2011, including Cowichan. In 2011 incremental tags were applied to Philips River Chinook to evaluate this location as a potential southern BC mainland inlet indicator. This project was completed successfully in the above years, with the similar success anticipated in subsequent years.

2) Atnarko Chinook CWT Indicator Stock
(2009: $135,500, 2010: $99,500, 2011: $109,500)
TR 25 Issue (Primary): 1, 4, 6, 10

The objective of this project was to expand the Atnarko Chinook assessment program to for the purpose of developing an exploitation rate indicator for Central coast Chinook stocks. Technical Report 25 noted Central BC was lacking a Chinook indicator. The only northern indicator, Kitsumkalum is a stream type stock. The Atnarko is an ocean type stock. Progress toward meeting the objectives included the application of 250,000 incremental CWTs, sampling of the terminal commercial, sport, and First Nations fisheries, and reintroduction of a mark-recapture program to improve escapement estimates.

The 2009 escapement mark-recapture program was very successful. 925 tags were applied, 2630 carcasses examined and 24% of tags recovered, to provide a spawning estimate of 10,700 Chinook (CV 5.7%). The commercial fishery sampling rates ranged from 34-72% (110 CWT recovered) with the exception that catch in the first week of July was not sampled. The Bella Coola First Nations fishery was sampled at 25% and 57 CWTs recovered. The creel program was satisfactory in interviewing anglers for catch rates and CWT sampling. However, aerial effort surveys were problematic due to high flows.

The 2010 escapement mark-recapture program was impacted by a major flood event at the end of September. Prior to the flooding event, 1008 Chinook were tagged, 1025 carcasses examined, and 87 tags recovered. The preliminary escapement estimate using the standard is 10,900 - 11,760 (CV 10-11%). Eighty-six CWTs were recovered. The Bella Coola River First Nation fishery caught 3,200 fish (preliminary), 775 were examined for fin clips, and 76 heads collected for CWT dissection. Unfortunately, the creel survey program did not proceed in 2010 due to staffing issues.

The 2011 escapement mark recapture program was successfully implemented. 833 Chinook were tagged, 775 carcasses examined, and 68 tags recovered, providing a preliminary escapement estimate of 9105 (CV 14%). In 2011 all terminal fisheries were monitored. Greater than 30% of the First Nations FSC fishery was sampled and 47 CWTs recovered. The commercial gillnet fishery caught 4600 Chinook and the Bella Coola sport fishery caught less than 200 Chinook due to flow conditions. CWT data for both fisheries are pending. This project should be successful in meeting its objectives.

3) Increased CWT Recovery in Indicator Escapement Programs
(2009: $83,500, 2010: $66,500, 2011: $80,500)
TR 25 Issue (Primary): 5, 6

These projects were designed to improve the quantity and quality of CWT data (low sampling rates in escapement (Issue 5) and uncertainty in escapement estimates (Issue 6)) at spawning grounds and hatcheries. The strategy varied by location, details of which are described below along with results. Overall, this project was considered successful in meeting its objectives.

At Quinsam, a new study design to estimate river spawners determined the old methodology to be biased low by 2% to 11%. Subsequently, the new estimate will be used.
In 2009, the lowest escapement was observed in the Nicola such that 2 additional samplers helped recover carcasses before predators could remove them. Only 33 CWTs were recovered. One-hundred ninety-one (191) and 115 CWTs were recovered in 2010 and 2011 respectively.

At Harrison in 2009, 56 CWTs were recovered with increased sampling effort, but a higher sampling rate was not achieved due to high water flows. In 2010 sampling was again hampered by poor water visibility due to a landslide, however 91 CWTs were collected. The turbidity remained for 2011; however water levels remained low for most of the project. Approximately 253 AFC heads were collected (CWT not read yet).

At Chilliwack, 2 additional staff achieved a 10% higher sampling rate. An additional study to determine the accuracy of wands for detection of CWTs on the spawning grounds was conducted. Results from motivated samplers using 2nd generation wands determined 3% of CWTs from adipose fin-clipped CWT Chinook were missed compared to 29% of CWTs from the unmarked CWT Chinook. It was concluded that wands were not a reliable method for detecting CWTs in unclipped fish. In 2010-11, heads were collected from every available carcass. Approximately 3650 heads were collected in each year.

At Cowichan River, an additional crew was hired to survey about 1/3 of the Cowichan River not part of the standard survey area, and extend the survey period by 4 weeks. In 2009, this additional survey effort represented 19% of the fish sampled at Cowichan River. Since 2009, recovery of carcasses has increased by 5% and recovery of heads from ad-clipped Chinook has increased more than 600% (confounded with increased tagging).

At Big Qualicum in 2010 planned sampling of spawners below the fence was not implemented, so escapement CWTs are biased low. In 2011, visual surveys were conducted below the fence to aid in the recovery of CWTs, as well as to calibrate the traditional escapement estimate. Preliminary results for 2011 using AUC methodology estimate escapement of CWTs below the fence at 26% of the estimate using the traditional methodology.

At Robertson hatchery, heads were systematically re-sampled to improve the quality assurance and quality control (QA/QC) on CWT recoveries. The hatchery did not install the carcass net funded for $2K in 2009. At Kitsumkalum, all live fish with clipped adipose fins have been sacrificed during the tag application phase of the mark-recapture program since 2009. The average CWT sampling rate since 2009 increased to 18% from 13%.

4) CWT Head Processing and Data Management
(2009: $95,000, 2010: $135,000, 2011: $100,000, inclusive of $5,000 for improvements to freezer troller compliance)
TR 25 Issue (Primary): 1, 2, 4, 5, 7, 9, 10

This project funding addresses incremental costs in CDFO head lab operations and data entry resulting from increased quantities of samples from all CDFO programs as well as increased head recovery costs due to improvements in Freezer Troll head sampling.

Increased tagging, increased sampling rates at spawning grounds and in commercial, sport, and First Nation fisheries, increased sampling due to the development of the Atnarko indicator program, and increases in US mass-marked Chinook in Canadian fisheries have resulted in to the growth of CWT dissection and lab data entry activities. Additionally, significant progress has been made in improving representative sampling of the troll fisheries through the introduction of conditions of license for 50% of the troll fleet to retain heads for all kept Chinook. In 2009, sampling rates increased from 12% to 19% for Chinook. In 2010, sampling rates for Chinook increased to 21%. 2011 results are not yet available. The goal is to increase sampling rates for the freezer troll fleet above 20%. Results of this effort are an increased sampling of Canadian troll fisheries and an improved timeliness of reporting in general. This project was successful in meeting its objectives.

This project is incremental to the 'Increased CWT Recovery Costs' project above (project #3). A goal is to achieve the 20% freezer troll sample rate while reducing the condition of license requirement to < 30% of the fleet to reduce costs of dissection and data entry of samples that do not meet QA/QC requirements. This project directs funds to the additional assessment of quantity and quality of fisher submitted samples and to the involvement of Conservation and Protection Fishery Officers that communicate warnings and enforce compliance. Improvements have included an increased enforcement for Canadian troll freezer sampling contributing to the success of the CWT recovery project

5) CWT Reporting System – Modifications to CDFO Mark Recovery Program (MRP) System
(2009: $90,000, 2010: $90,000, 2011: $90,000)
TR 25 Issue (Primary): 14, 15, 17, 18

In 2009, a staffing process was completed and a full-time programmer was hired to address issues related to the CWT program: data quality, processing, and accessibility of CWT data. Improvements made to Canada's Mark Recovery Program (MRP) information system that supports the coded wire tag program include: (1) Rewrite of programs that handle data from 1990-1996 resulting in the completion of reviews and improvements to data and CWT estimates from 1990 to present; (2) increased flexibility for the stratification of CWT estimates by species, fisheries, locations and periods; (3) improved inter-relationship with other Canadian Systems (escapement, catch, creel) resulting in improvements to data and the timeliness for CWT calculations; and (4) improved access by Canadian users to CWT information. These changes are reflected in the quality, completeness (version 4.1) and timeliness of submissions to the United

States Regional Mark Information System (RMIS) through data sharing commitments. This project was considered successful in meeting its objectives.

6) Regional CWT and Catch Estimation QA/QC
(2010: $75,000, 2011: $75,000)
TR 25 Issue (Primary): 6, 8

The staffing process was completed in March 2010 and a full time technician was hired to provide QA/QC of all catch data associated with CWT recoveries and to ensure proper stratification for tag expansions. We initiated data quality checking of previous salmon seasons' logbook data. Years 2007 through 2010 have been completed and 2011 data were checked as received. During the off-season, staff will resume checking of 2006 and earlier years. This project was successful in meeting its objectives.

7) Sport and First Nation CWT Recovery Coordination
(2009: $85,000, 2010: $85,000, 2011: $85,000)
TR 25 Issue (Primary): 6, 8

Since 2009, a full time senior technician was hired to coordinate the sampling and processing of CWT recoveries in all sport and First Nations fisheries and implement improvements in sampling procedures across these fishing sectors. In 2010, a significant amount of overtime was accrued due to the extent of new initiatives introduced. As a result, in 2011, two additional projects (discussed below) were initiated to hire seasonal staff to support improvements to recreational and First Nations sampling programs. This project was successful in meeting its objectives.

8) Improvements to the recreational catch database (CREST)
(2011: $30,000)
TR 25 Issue (Primary): 4, 6, 10

The objective of this project is to enhance the current recreational catch database to improve estimates supporting CWT expansions. The migration of the CREST database to standardized regional implementation is currently underway. A list of improvements and activities has been prioritized for completion by the end of fiscal. Benefits to the CWT system include improved database operation, regional standardization, and improved access to catch estimates by science staff. This project will likely be successful in meeting its objectives.

9) Feasibility and Design of Regulations Database
(2010: $20,000, 2011: $9,500)
TR 25 Issue (Primary): 9

This project is the second year of a feasibility study to change business processes and design a database to capture salmon regulations. Regulations would be captured according to Regional data standards and maintained in a Pacific Region Oracle database. This regulation database would be available as records of management actions and for use in generating catch estimates and CWT expansions relative to regulations, and in timely and accurate reporting on effects of

management actions. This project will likely be successful in meeting its objectives.

10) Albion and Tyee Test Fishery Historic Data
(2011: $26,000)
TR 25 Issue (Primary): 6, 8

Two technicians were hired to incorporate historic data from the Albion and Tyee Test Fisheries into the Fishery Operations System (FOS). Work has begun on input of 2002 and earlier Albion test fishery data into FOS. The entry of historic catch records is underway. Entry of biosample records will follow. Work has begun on analysis of the North Coast Area MS Access database which contains the Tyee test fishery data. Mapping of these data to FOS data structures is underway. Input of some of the supporting data e.g., fishery openings and net configurations, back to 1955 has been completed. This project is ongoing and will likely be successful in meeting its objectives.

11) Recovery of Historical Records of CWTs Obtained from CDFO Juvenile Salmon Surveys in BC Marine Areas
(2011: $5,000)
TR 25 Issue (Primary): 9, 14

The objective of this project is to obtain records of CWTs recovered from salmon captured during many years of annual CDFO marine area surveys for juvenile salmon. The data are currently in hardcopy and old non-functional database formats. An appropriate format for reporting these recovery records will be established, the data will be entered into an Access database, validated, and exported for incorporation into the Mark Recovery Program (MRP) database which is the CDFO repository for all Canadian and U.S. CWT recovery data. Over 8,000 CWT recoveries have been obtained from the annual CDFO juvenile salmon surveys but only a small number of these currently exist in MRP and RMIS. Work on this project is expected to start early in 2012 and is likely to be successful in meeting its objectives

12) Regional Sport and First Nations Fishery CWT Recovery Improvements
(2009: $140,000, 2010: $182,000, 2011: $140,000)
TR 25 Issue (Primary): 4, 7, 9, 10, 11

The objectives of this project are to increase the head submission rates, improve the data associated with the Sport Head Recovery Program, and to improve CWT sampling in First Nations fisheries.

DFO introduced significant new projects since 2009 which have been augmented and continued in 2011. Measures in the recreational fishery include: public relations/outreach initiatives, expansion of south coast region creel program to include opportunistic direct visual sampling of CWTs and increased communication with recreational anglers from DFO creel survey staff, and implementation of projects to expand or improve sport head recovery program depots (e.g. signage, improvements to infrastructure to support increased capacity, maintenance, tracking, reports to anglers, etc.).

Collaboration with area staff to modify the head collection program has improved CWT recoveries in remote areas (Northern West Coast Vancouver Island, North Island, Central Coast, Northern BC, and BC interior). Results from the voluntary Sport Head Recovery program indicate increased Chinook heads recovered in 2011 (7489 heads) versus 2010 (6,210 heads) versus 2009 (4,072 heads). Average 2010 Chinook sport submission rates for 7 ocean and 6 freshwater sport fisheries were above 20% with the exception of Central Sport (9%) and Lower Fraser (12.5%).

DFO provided support to Lower Fraser First Nations to collect CWT samples from commercial and FSC fisheries as an integrated process in the Lower Fraser First Nations catch monitoring program. The Mid-Fraser, BC Interior, Cowichan, Big Qualicum, Somass and Bella Coola First Nations have expanded catch monitoring programs to collect CWT samples, improving the precision of the catch estimates. Sampling procedures, forms, data entry and programming have been modified to support these new data sources. This project is likely to be successful..

13) Expansion of Catch Monitoring and Sampling Southern BC Sport Fishery
(2010: $80,000, 2011: $180,000)
TR 25 Issue (Primary): 4, 6

This project aims to conduct or increase recreational survey activity in areas and times currently unmonitored and verify assumptions regarding fishing effort to improve estimates of CWT expansions i.e. stock specific impacts, cohort size, ERs, and model outputs. Progress on this project includes creel surveys in key WCVI areas were expanded and extended from mid-August through September 2011. The creel survey in Juan de Fuca was extended from October (2011) to March (2012) which extends the survey to cover the full-year in this area. Surveys were extended from January to March (2012) in portions of Strait of Georgia (PFMA's 17, 18, 19). Improvements to the CWT system include increased sampling for tags to improve expansions. Extensions of survey to non-surveyed periods will test the assumptions that current effort and catch is low, consistent with historical data. This project is likely to be successful.

14) Chilliwack River Creel Survey Extension
(2011: $15,000)
TR 25 Issue (Primary): 4, 6

Historically, CWT recoveries for the first half of September were indirectly determined by the submission rate measured with creel survey and head recovery data for the last half of September. The accuracy and prudence of this approach has not been previously been evaluated. Hence, we initiated the Creel Survey project two weeks earlier to allow direct estimates of catch and CWT recoveries for the entire month of September. The project will provide catch estimates by species and mark status and an estimate of total angler effort for the September 1st to 15th period. Additional catch and effort estimates are provided bi-monthly for the September16th to November 15th period by Fraser River Stock Assessment using existing CDFO funding Work on this project will also include a comparison of the 2011 estimates to the estimates of catch and CWT recoveries that would have generated using the method employed in 2010 and earlier. Currently, field operations (data collection) and data entry are complete. Generation of catch estimates is on-going and a comparison of analytical

techniques will occur in early 2012. This project is likely to be successful.

15) CWT Sampling – Lower Fraser First Nations CWT Recovery Improvements
(2011: $40,000)
TR 25 Issue (Primary): 4, 7, 9, 10, 11

This project directs efforts to collaborative work with the Lower Fraser Fisheries Alliance (LFFA) to improve CWT recoveries in First Nations Food, Social and Ceremonial (FSC) fisheries and Economic Opportunity (EO/Commercial) fisheries conducted in the Lower Fraser. In 2011, LFFA, with support from DFO, has been developing communications products and promotional materials, and conducting communication sessions with 26 Bands in the Lower Fraser to increase knowledge and participation in coded wire tag sampling programs by First Nations monitors and fishers in the Lower Fraser. Prior to 2011, less than 30 First Nations tag recoveries have occurred in the Lower Fraser. In 2011 alone, 18 heads have been recovered to date. This project is likely to be successful.

16) CWT Sampling – WCVI and Strait of Georgia First Nations CWT Recovery Improvements
(2011: $20,000)
TR 25 Issue (Primary): 4, 7, 9, 10, 11

This project directs efforts to collaborative work with the WCVI and Cowichan First Nations to improve CWT recoveries in First Nations Food, Social and Ceremonial (FSC) fisheries and Economic Opportunity (EO/Commercial) fisheries. DFO has been collaborating with First Nations to develop standardized monitoring and reporting materials, and conducting communication sessions to increase knowledge and participation in coded wire tag sampling programs by First Nations monitors and fishers. In 2011 CWT funding was provided for a Cowichan First Nations crew to monitor their FSC fishery. This project is likely to be successful.

17) CWT Sampling – CWT Sampling –First Nations Sampling Improvements (seasonal)
(2011: $35,000)
TR 25 Issue (Primary): 4, 7, 9, 10, 11

Improvements to First Nations fishery sampling in 2010 resulted in significant seasonal overtime. In 2011, this issue was address by hiring a seasonal technician to focus on implementation of improvements and communication with the First Nations communities. The project was successful in meeting its objectives.

18) CWT Sampling – Sport Fishery Sampling Improvements (seasonal)
(2011: $39,000)
TR 25 Issue (Primary): 4, 7, 9, 10, 11

Improvements to recreational sampling in 2010 resulted in significant seasonal overtime. In 2011, this issue was address by hiring a seasonal technician to focus on implementation of improvements and communication with the recreational community. The project was

successful in meeting its objectives.

19) Middle Shuswap Sport Fishery Catch Estimation and CWT sampling
(2011: $29,500)
TR 25 Issue (Primary): 4, 7

The objective of this project was to estimate the encounters of Chinook salmon by clip status, and any other regulation variation that affects the age composition of retained and released catch. This project is one component of a broader objective to decrease the uncertainty in estimates of terminal fishery catch and increase sample rates in terminal fisheries. In 2011 a pilot fish card survey was introduced and will be compared with estimates provided by the creel interview surveys. In 2011, the creel survey estimated 3 unmarked adult Chinook, 0 un-marked adult Chinook releases and 632 hours fished. No marked Chinook or jacks were encountered during the study. Unlike past surveys, catch rate and effort was very low likely due to a combination of higher than normal water levels, late migration and low stock abundance. If the 2011 creel was not funded the catch estimate derived using less rigorous methods would have been biased high. This project is likely to be successful.

20) Improvements to Central Coast recreational fishery monitoring
(2011: $5,000)
TR 25 Issue (Primary): 4, 6

Objectives of this pilot program were to assess the feasibility of using roving surveys to measure the incidence of adipose fin clips in Chinook salmon and augment CPUE data for Central Coast recreational fisheries. CWT recoveries in Canadian recreational fisheries are typically from voluntary head submissions. Expansions of CWT's from voluntary submissions require estimates of catch and independent estimates of adipose fin clip incidence by time and area. This pilot program was initiated to provide stratified mark-rate data for use in the calculation of CWT expansion factors for Central Coast sport recoveries.

Estimates of Chinook harvest by independent (non-lodge based) anglers were attempted using CPUE data from on-water interviews and effort index information from trailer counts in Bella Coola. Most recreational Chinook catch in the Central Coast is associated with fishing lodges and catch data are provided through log books.

The Central Coast Conservation and Protection (C&P) branch of DFO conducted a total of 401 on-water interviews between June14 and Sept. 15, 2011 during which 99 Chinook were examined and 9 fin clipped fish were encountered.

An estimated 1,899 Chinook were harvested by independent anglers in DFO statistical areas 7&8 during the study period. The total independent harvest of Chinook was estimated at 306 for DFO statistical areas 9&10 combined. The independent harvest of Central Coast Chinook for the study period was estimated at 2,205 while the lodge Chinook catch was 5,496.
Submission rate calculations and subsequent CWT expansion factors have yet to be calculated. The project was successful in meeting its objectives.

5.1.2 Canadian Projects Recommended for 2012

The Canadian CWTIT solicited projects to address priority issues identified in PSC Technical Report 25 (2008; see also Table 5-3) through an internal process which resulted in 40 projects recommended for funding, totaling $1,500,000. Projects recommended for funding and contingency projects are listed in Table 5-1.

Table 5-1. Canadian CWT Improvement Projects approved for FY2012.

Project Category	TR25 Issue	Project Title (* Multi-year)	Cost ($CDN)
Increased CWT Marking of CN Indicators	2	Incremental tagging of 12 Indicator Stocks (Robertson Creek, Cowichan, Big Qualicum, Quinsam, Lower Shuswap, Nicola, Chilliwack, Harrison, Taku, Stikine, Kitsumkalum, and Atnarko)*	$358,500
Increased Deadpitch CWT Recovery Effort, all Indicators	5	Increased effort in CWT recovery in indicator escapement programs (Quinsam, Cowichan, Big Qualicum, Chilliwack, Harrison, and Nicola)*	$80,500
Uncertainty in Estimates of Escapement or Terminal Fishery Catch	1& 6	Atnarko Chinook CWT Indicator Stock*	$110,000
Agency Staffing (Programmer, Catch QA/QC Analyst, CWT Recovery Coordinator)	4,7,8,9,10, 11,14,15,17 &18	Regional CWT Data system Programming, Regional CWT and Catch Estimation QA/QC, and Regional Sport & FN Fishery CWT Recovery Coordination *	$250,000
Increased Head Recovery Costs	2, 4, 5, 7	CWT Head Lab Processing and Data Management*	$70,000
Low Sample Rates in Terminal Fisheries, Sport and FN CWT recovery improvements	4,7,9,10 & 11	Regional Commercial, Sport & FN Fishery CWT Recovery Improvements*	$215,000
Low Sample Rates in Terminal Fisheries, FN Fishery CWT recovery improvements	4 & 10	Improvements in CWT Recovery in Terminal First Nations Fisheries (Fraser River, Georgia Strait, WCVI, Bella Coola, and Cowichan)*	$80,000
Low Sample Rates in Terminal Fisheries, FN Fishery CWT recovery improvements	4 & 10	Improvements in Catch Estimates and CWT Recovery in Terminal Recreational Fisheries	$174,000
CWT data reporting system improvement	13, 15, 17	Database Improvements	$162,000
		GRAND TOTAL	$1,500,000

5.2 US CWTIT Projects

5.2.1 Progress on US Projects Undertaken in 2011

A total of 13 US projects were funded in FY 2011, inclusive of one covering costs associated with a bilateral CWTIT workshop. The total expenditure of US CWTIT projects in 2011 was

$1,500,000. Progress on funded projects is described below and each description includes the CWT issue listed in the PSC CWT Workgroup Tech Report 25 (Table 5-3, PSC 2008) that the program is intended to address.

1) SEAK Tag Lab Increased Heads
(2010: $65,000 USD, 2011: $69,800 USD)
TR 25 Issue (Primary): 7

Objectives of the project were to provide funds to cover a portion of costs associated with the increased number of "NO TAG" heads associated with mass marking that are shipped to the SEAK CWT Lab. Cost recovery was for freight and personnel. This project has been funded for 2 years. The project is complete for the two years of funding to date. The occurrence of heads from Chinook with ad-clips, but without CWTs has increased from 10% to over 50% in the past few years in most SEAK fisheries due to mass marking in the Pacific Northwest. The project helped maintain the timeliness and accuracy of CWT data from Chinook caught in SEAK. This project was successful in meeting its objectives and future requests are anticipated for this project.

2) Stikine River Smolt Tagging
(2010: $121,300 USD, 2011: $113,800 USD)
TR 25 Issue (Primary): 1, 2

Objectives were to tag wild Chinook smolt in the Stikine River in spring 2011 and 2012 (with U.S. and Canadian funding), to subsequently estimate total adult and smolt production, exploitation, survival and provide run reconstruction for TBR and CTC work. This is a joint stock assessment project. Canadian CWTIT funds supported part of this project in 2009-2011. No surrogate hatchery exists. Tagging targets for smolt were exceeded (40,000) in 2011 with joint efforts and we expect similar success in 2012 due to improvements in capture methods. This project will provide high-quality data to manage the terminal run for this stock. Improved adult estimates will assist in the harvest sharing accounts between countries. Stock parameters are estimated directly from wild-stock tagging. This project was successful in meeting its objectives a proposal has been submitted for 2012.

3) Chilkat River Smolt Tagging
(2010: $91,100 USD, 2011: $97,700 USD)
TR 25 Issue (Primary): 1, 2

Objectives were to tag wild Chinook smolt in the Chilkat River in fall 2010 to spring 2012, to subsequently estimate total adult and smolt production, exploitation, survival and provide run reconstruction for the CTC and ADF&G. This is a wild stock and no surrogate hatchery exists. Tagging goals have been met, with 38,000 wild Chinook CWTd in fall 2010, 4,000 in spring 2011 and about 29,000 in fall 2011. This project will provide high-quality data for use as a CTC ERA and escapement indicator stock and thus far has been successful in meeting its objectives. Future annual requests are anticipated for this project.

4) Elk River Tagging, Creel and Escapement
(2010: $113,600 USD, 2011: $140,100 USD)
TR 25 Issue (Primary): 1, 3

Objectives were to tag Chinook from the Elk River Hatchery, the proposed mid-Oregon CWT indicator stock, to estimate freshwater harvest and escapement and sample them for CWTs. All aspects of the project were still in progress. This project was successful for the 2010 funding and the 2011 work was in progress. This project will likely provide high-quality data for this mid-Oregon Coast stock and use as a CTC ERA stock. Future annual requests are anticipated for this project.

5) SEAK—Increased Sampling in Net and Terminal Fisheries
(2010: $43,400 USD, 2011: $69,700 USD)
TR 25 Issue (Primary): 4,7

Objectives were to increase the sampling rates in commercial net (seine and gillnet) and terminal commercial fisheries, by funding additional port samplers in 3 ports. Sampling for this project was completed during 2010 and 2011 and sampling rates were increased in most the SEAK net fisheries. Improvements to the CWT system include a higher sampling and recovery rates in specified fisheries, which increase the precision of CWT statistics. This project has been funded for two years, was successful in meeting into objectives. Future requests are likely.

6) Puget Sound Freshwater Sport Sampling
(2010: $182,500 USD, 2011: $182,800 USD)
TR 25 Issue (Primary): 4, 6

Objectives were to increase the sampling rates in freshwater sport fisheries in Puget Sound and to develop an indirect method for estimation of the number of CWTs present in these fisheries in the past and future. Intensive creel surveys were conducted in 2010 and 2011 on 4 rivers (Skagit, Skokomish, Nisqually and Skykomish) to estimate total harvest, effort, CWTs, marked rate, unmarked mortality and to collect biological data. Sampling for this project was completed during 2010 and 2011 and results will be reported springing the near future. Improvements include higher sampling rates in specified fisheries. This project has been successful in completing creel sampling and harvest estimation of 2010 and 2011 fisheries. Future requests are anticipated for an additional years; this project has been funded for 2 years.

7) Nisqually River Indicator Stock Tagging
($48,300 USD)
TR 25 Issue (Primary): 1

This project will allow for the monitoring and evaluation of the Nisqually River stock and to be able to identify returns from the integrated program in the fishery, at the hatchery or at the new main stem weir (RM12) to be installed seasonally July-November beginning in 2011. This funding will be used to CWT an additional 325,000 un-marked fish, for a DIT group for this aspect. This project has not begun yet due to the late installation of the new weir in 2011; it is planned to be done during the 2012 season. This project will provide a DIT group for the

integrated program for this stock. Success of the project is unknown due to the late start date. Future requests are unknown.

8) Salmon River Hatchery vs. Wild Stock comparison
($144,500 USD)
TR 25 Issue (Primary): 1,2

This is an 18-month grant to tag 30,000 wild smolts in the Salmon River. It included a feasibility study in 2011 to determine trapping locations and gear. Smolt will be tagged during the 2012 season and adult returns will continue through 2017. Exploitation rates from these wild stock fish will be compared statistically to rates from the hatchery stock at the same location, along with distribution, age at maturity and survival rates. The representativeness of the Salmon River hatchery as a surrogate for the NOC wild stocks is the question at hand. Progress: The feasibility study in 2011 produces about 7,500 Chinook smolt; the remainder of the project will occur in the future. Improvement: This project will compare CWT statistics from a hatchery and wild stock in the same system. It is too early to determine the success of this project. Future requests are expected for one additional year.

9) SEAK—Marine Sport Sampling Increase
($79,700 USD)
TR 25 Issue (Primary): 7

Objectives were to increase the sampling rate in the SEAK sport fishery in major ports with sampling rates below 20%. This project funded additional sampling for marine sport fisheries in Juneau and Ketchikan. This project is complete and sampling rates were increased from 10-15% (recent 5 years both ports) to about 22% in Juneau and to about 18% in Ketchikan, in 2011. Improvements to the CWT system include substantially increased the number of CWTs recovered in these two ports and improved the CWT statistics derived from them for the multiple stocks present in both locations. Thus far, the project has been successful in meeting its objectives. Future requests are expected for annually.

10) SEAK—New Data Loggers
($49,600 USD)
TR 25 Issue (Primary): 7

Objectives were to purchase 27 improved data loggers to replace the antiquated units purchased 8 years ago. This increased the efficiency and data quality of CWT data collected from commercial landings. This project is complete and the data loggers increased sampling efficiency, and data quality because of the features added to these units for immediate feedback for any missing or inappropriate data fields. Validation is complete. This project will keep sampling rates higher by improving sampling efficiency. Thus far, the project has been successful in meeting its objectives. No future requests are expected for many years.

11) WA Ocean Troll & Sport Sampling
($353,100 USD)
TR 25 Issue (Primary): 7

Objectives were to fund sampling of WA ocean troll and sport fisheries to replace funding lost through elimination of the Anadromous Fish Act funds. This program has been in place for many years with its present methodology. Well-developed sampling protocols are in place. This project is complete and all sampling objectives were met; sampling rates were about 40% for both fisheries in 2011. Validation of CWT data is complete. The main benefit of this project continues the base sampling to produce reliable CWT statistics for WA ocean troll and sport fisheries and the CWT'd stocks caught in them. Thus far, the project has been successful in meeting its objectives. Future requests are expected.

12) OR Troll & Columbia River Sport Sampling
($100,100 USD)
TR 25 Issue (Primary): 7

Objectives were maintain at least a 20% sampling rate and to implement complete electronic sampling of troll and recreational fisheries in Oregon in the Columbia River management area. This funding represents about 50% base sampling lost to elimination of the Anadromous Fish Act funds and about 50% of CWT improvement. This project is complete; sampling rates were 46% in the sport fishery and 34% in the troll fishery in 2011; and the sampling protocol in all ports were changed to full electronic sampling. Validation is underway. Funding this project continues the base sampling to produce reliable CWT statistics for the affected fisheries and stocks. Electronic sampling was implemented to produce statistics for DIT stocks. Thus far, the project has been successful in meeting its objectives. Future requests are expected.

13) CWTIT Meetings and Projects
($50,800 USD)
TR 25 Issue (Primary): TBD

This project represents funds from 2011 to hold CWTIT meetings and to fund a future CWTIT project(s). A portion of these funds were used to hold the CWTIT Workshop in 2011. This project allows the CWTIT to meet and review progress and to reserve funds for a potential CWTIT project in 2012.

5.2.2 U.S. Projects Recommended for 2012

Projects were solicited through a request for proposals released for 2 months in late 2011. Projects were evaluated by the CWTIT on the basis of those providing the most perceived benefits to the CWT program for the associated cost. Table 5-2 provides a summary of the recommended projects by project category. Project categories are based on the themes specified in PSC Technical Report 25 (PSC 2008). Projects were scored and ranked individually by U.S. CWTIT members and consensus was subsequently reached to develop draft recommendations.

These were deliberated by the bilateral CWTIT. The U.S. PSC approved the following list of recommendations. The projects recommended by the U.S. represent a complete expenditure of the $1.5 million available under this program for 2012. The CWTIT believes that the recommended projects will provide short- and long-term benefits to the CWT program and benefits to abundance–based management of Chinook salmon under jurisdiction of the PST.

Table 5-2. U.S. CWT Improvement Projects approved for FY2012.

Project Category	TR25 Issue	Project Title (* Multi-year)	Cost ($USD)
Indicator hatchery stock tagging, terminal fishery & escapement # & sampling	1,3, 4, 6	Mid-Oregon Coast CWT Recovery, and Escapement of Elk River Fall Chinook *	$123,501
CWT Lab equipment purchase	13	Purchase of Microscope and Related Lab Equipment	$5,312
Database & reporting system upgrade	13, 14, 17, 18	ODFW CWT Database Program System	$110,000
Low sample rates in terminal fisheries and estimation of harvest	4, 6	CWT Harvest Estimation in Puget Sound Freshwater Chinook Sport Fisheries *	$185,122
Indicator stock tagging of wild stock without hatchery representation	1, 2	Stikine River Chinook Smolt CWT – Bilateral *	$121,883
CWT data reporting system improvement	8, 9	Spring Troll Re-stratification in SEAK	$29,685 [1]
Replace outdated CWT equipment	12, 13	Replace ODFW Outdated Handheld CWT Wand Detectors *	$80,710 [2]
Reduce head processing costs & improve sampling efficiency	4, 7, 13	Purchase Commercial Port Sampling Wands in SEAK	$131,309 [2]
Replace outdated CWT equipment	12, 13	Replace WDFW Outdated Handheld CWT Wand Detectors *	$230,726 [2]
CWT data reporting system improvement	13, 15, 17	Improve Timeliness of WA Catch & Sample Datasets for CWT expansion	$72,206
Low sample rates in mixed-stock fisheries	7	Sampling Washington Ocean Salmon Fisheries *	$339,400
Low sample rates in mixed-stock fisheries	7, 13	Improvements to Oregon Ocean CWT Sampling in CR Mgmt Area	$100,101
		GRAND TOTAL	$1,529,685

[1] Project to be funded with remaining FY11 funds.

[2] Wands will be purchased through WDFW; $401,521 in total for 26 SEAK wands @ 3,465 ea ($90,085 total), 30 ODFW wands @ $2,690 ea ($80,710 total) and 85 WDFW wands @ $2,690 ea ($230,726 total).

Table 5-3. Key to issues in PSC Technical Report 25.

TR 25 Issue No.	Description
1	Incomplete and inconsistent representation of production regions
2	Determination of tagging levels
3	Representation of hatchery production
4	Low sample rates in terminal fisheries
5	Low sample rates in escapements
6	Uncertainty in estimates of escapement or terminal fisheries
7	Low sample rates in highly mixed stock fisheries
8	Uncertainty in estimates of catch in high mixed stock fisheries
9	Non-representative sampling
10	Incomplete coverage of fisheries or escapement
11	Voluntary sport fishery sampling programs
12	Sampling methods to facilitate sampling of mark selective fisheries and CWT processing
13	Timeliness of reporting
14	Incomplete/no exchange of CWT data
15	Inter/intra-agency coordination
16	Unclear authority to establish and enforce standards
17	Updating data is difficult and updates cannot be tracked
18	Validation is inadequate
Chapter 6	Decision Theoretic Tool

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APPENDICES.

Appendix A Relationship between exploitation rate indicator stocks, escapement indicator stocks, model stocks, and additional management action stocks identified in the PST annex.

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Appendix A.1 Indicator stocks for Southeast Alaska and Transboundary Rivers.

Area	[1]Annex Stock Group	Annex Indicator Stocks	Run Type	Escapement Indicator Stock	Escapement Objective[a]	Model Stock	Escapement Goal in Model[b]	Exploitation Rate Indicator Stock	CWT Acronym
SEAK/TBR				Taku	219,000–36,000 [2]			Taku	TAK
				Stikine	14,000–28,000 [2]			NA	
				Alsek	3,500–5,300			NA	
Yakutat				Situk	500–1,000 [2]			NA	
SEAK Northern Inside				Chilkat	1,750-3,500 [2]			Chilkat	CHK
			Spring	King Salmon	120–240 [3]		9,110	Alaska Spring (Little Port Walter, Neets Bay Hatchery, Whitman Lake Hatchery, Deer Mountain Hatchery, Crystal Lake Hatchery)	AKS
SEAK Central Inside				Andrew Creek	650–1,500 [3]				
SEAK Southern Inside				Unuk	1,800–3,800 [2]	Alaska South SE			
				Chickamin	450–900 [3]				
				Blossom	250–500 [3]				
				Keta	175–400 [3]				

[1]SEAK fisheries will be managed to achieve escapement objectives for Southeast Alaska and Transboundary River Chinook stocks.
[2]Based on large spawners (ocean age 3 and older).
[3]Based on index count of large spawners (ocean age 3 and older)
NA = not available
[a]CTC escapement objective; [b]Agency objective

Appendix A.2 Indicator stocks for Canada.

Area	Annex Stock Group	Annex Indicator Stocks	Run Type	Escapement Indicator Stock	Escapement Objective[a]	Model Stock	Escapement Goal in Model[b]	Exploitation Rate Indicator Stock	CWT Acronym
NBC-Area 1	North / Central British Columbia	Yakoun	Summer	Yakoun	Escapement goal range by stock	North / Central BC	117,500	Kitsumkalum	KLM
NBC-Area 3		Nass	Summer	Nass					
NBC-Area 4		Skeena		Skeena					
CBC-Area 8			Spring/Fall	Rivers Inlet					
CBC-Area 9			Spring	Dean				Atnarko	ATN
WCVI	West Coast Vancouver Island Falls	Artlish, Burman, Gold, Kauok, Tahsis, Tashish, Marble	Fall	WCVI Aggregate (Artlish, Burman, Kauok, Tahsis, Tashish, Marble)	Escapement goal range for aggregate	WCVI Natural	42,734	Robertson Creek	RBT
						WCVI Hatchery	6,472		
Upper Strait of Georgia	Upper Strait of Georgia	Klinaklini, Kakweikan, Wakeman, Kingcome, Nimpkish	Summer/ Fall	Upper Strait of Georgia (Klinaklini, Kakweikan, Wakeman, Kingcome, Nimpkish)	Escapement goal range for aggregate	Upper Strait of Georgia	23,300	Quinsam	QUI
Lower Strait of Georgia	Lower Strait of Georgia		Summer/ Fall			Lower Strait of Georgia Hatchery	5,318	Puntledge	PPS
								Big Qualicum	BQR
		Cowichan, Nanaimo	Fall	Lower Strait of Georgia (Cowichan / Nanaimo)	Escapement goal range for aggregate	Lower Strait of Georgia Natural	21,935	Cowichan	COW
								Nanaimo	NAN
Fraser River	Fraser Early	Upper Fraser Mid Fraser Thompson	Spring	Fraser Spring-run Age 1.2	Escapement goal range by stock	Fraser Early	93,700	Nicola	NIC
				Fraser Spring-run Age 1.3				Dome	DOM
			Summer	Fraser Summer-run Age 1.3				NA	NA
				Fraser Summer-run Age 0.3				Lower Shuswap	SHU
	Fraser Late	Harrison River	Fall	Harrison River	75,100-98,500	Fraser Late	75,100	Chilliwack	CHI
								Harrison	HAR

[a]CTC escapement objective; [b]Agency objective

Appendix A.3 Indicator stocks for Puget Sound.

Area	Annex Stock Group	Annex Indicator Stocks	Run Type	Escapement Indicator Stock	Escapement Objective[a]	Model Stock	Escapement Goal in Model[b]	Exploitation Rate Indicator Stock	CWT Acronym
North/ Central Puget Sound	North Puget Sound Natural Springs	Nooksack	Spring	Nooksack	Escapement goal range by stock	Nooksack Spring	4,000	Nooksack Spring Fingerling Nooksack Spring Yearling	NSF NKS
		Skagit		Skagit spring				Skagit Spring Fingerling Skagit Spring Yearling	SKF SKS
	Not an Annex stock		Fall			Nooksack Fall	11,923	Samish Fall Fingerling	SAM
	Puget Sound Natural Summer/Falls	Snohomish	Summer/Fall	Snohomish		Snohomish Wild	5,250	Skykomish	SKY
		Skagit group		Skagit sum/fall		Skagit Wild	9,778	Skagit Summer Fingerling	SSF
		Lake Washington		Lake Washington Falls		Puget Sound Natural Fingerling	16,966	NA	
		Green River		Green River				Green River Fingerling	GRN
		Stillaguamish		Stillaguamish		Stillaguamish Wild	2,000	Stillaguamish Fall Fingerling	STL
								Nisqually Fall Fingerling	NIS
Hood Canal	Not an Annex stock		Fall			Puget Sound Hatchery Fingerling		George Adams Fall Fingerling	GAD
South Puget Sound	Not an annex stock		Fall			Puget Sound Hatchery Fingerling	24,769	South Puget Sound Fall Fingerling	SPS
						Puget Sound Hatchery Yearling	9,136	South Puget Sound Fall Yearling	SPY
								Squaxin Pens Fall Yearling	SQP
								Univ. of Washington Accelerated Fall	UWA
			Spring					White River Spring Yearling	WRY

NA = not available

[a]CTC escapement objective; [b]Agency objective

Appendix A.4 Indicator stocks for the Washington Coast.

Area	Annex Stock Group	Annex Indicator Stocks	Run Type	Escapement Indicator Stock	Escapement Objective[a]	Model Stock	Escapement Goal in Model[b]	Exploitation Rate Indicator Stock	CWT Acronym
WA Coast/ Juan de Fuca	Washington Coastal Fall Naturals	Hoko	Fall	Hoko	Escapement goal range by stock	Washington Coastal Wild	21,500	Elwha Fall Fingerling	ELW
								Hoko Fall Fingerling	HOK
		Grays Harbor		Grays Harbor Fall				NA	
		Queets		Queets Fall				Queets Fall Fingerling	QUE
		Hoh		Hoh Fall				NA	
		Quillayute		Quillayute Fall				NA	
								Sooes Fall Fingerling	SOO
	Not an annex stock		Fall			Washington Coastal Hatchery	6,703	NA	
	Not an annex stock		Spring	Grays Harbor Spring				NA	
	Not an annex stock		Spring/ Summer	Queets Spring/Summer				NA	
				Hoh Spring/Summer				NA	
	Not an annex stock		Summer	Quillayute Summer				NA	

NA = not available

[a]CTC escapement objective; [b]Agency objective

Appendix A.5 Indicator stocks for Columbia River and Oregon Coast.

Area	Annex Stock Group	Annex Indicator Stocks	Run Type	Escapement Indicator Stock	Escapement Objective[a]	Model Stock	Escapement Goal in Model[b]	Exploitation Rate Indicator Stock	CWT Acronym
Columbia River	Not an Annex stock		Spring			Cowlitz Spring Hatchery	2,500	NA	CWS
						Willamette River Hatchery	13,500	Willamette Spring	WSH
	Columbia River Summers	Mid-Columbia Summers	Summer	Mid Columbia Summer	17,857[1]	Columbia River Summer	17,857	Columbia Summers	SUM
	Columbia River Falls		Fall			Fall Cowlitz Hat.	8,800	Cowlitz Tule	CWF
						Spring Creek Hatchery	7,000	Spring Creek Tule	SPR
						Lower Bonneville Hatchery	26,200	Columbia Lower River Hatchery	LRH
		Upriver Brights		Columbia Upriver Bright	45,000	Columbia Upriver Brights	40,000	Columbia Upriver Bright	URB
								Hanford Wild	HAN
		Deschutes		Deschutes River Fall	4,532	Subset of Columbia Upriver Brights	4,000	NA	
						Lyons Ferry	3,430	Lyons Ferry	LYF
						Mid Columbia River Brights	12,500	NA	
		Lewis River		Lewis	5,700	Lewis River Wild	5,700	Lewis River Wild	LRW
North Oregon Coast	Far North Migrating Oregon Coastal Falls	Nehalem	Fall	Nehalem	6,989	Oregon Coast	62,382	Salmon River	SRH
		Siuslaw		Siuslaw	12,925				
		Siletz		Siletz	2,944				
Mid-Oregon Coast	Not an Annex stock		Fall	Umpqua				Elk River	ELK
				Mid South Oregon Coastal Falls					

[1] Measured at Rock Island Dam

NA – not available

[a]CTC escapement objective; [b]Agency objective

Appendix B ISBM indices.

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Appendix B.1. ISBM Indices for Canadian fisheries based on CWT-based exploitation rate analysis (1999-2010). Footnotes appear at the end of Appendix B.

Stock Group	Escapement Indicator Stocks	CWT Indices[1]											
		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Lower Strait of Georgia	Cowichan[8]	0.517	0.196	0.260	0.247	0.363[6]	0.284	0.132	0.191	0.043	0.242	0.400	0.261
	Nanaimo[5,8]	0.163	0.154	0.260	0.247	NA[7]	NA	NA	NA	NA	NA	NA	NA
Fraser Late	Harrison River[3]	0.112	0.073	0.090	0.105	0.055[9]	0.032	0.058	0.032	0.035	0.031	0.058	0.134
North Puget Sound Natural Springs	Nooksack, Skagit	0.183	1.176	0.040	0.023	0.046	NA	NA	NA	NA	NA	0.106	0.014
		NA[2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Upper Strait of Georgia	Klinaklini, Kakweikan, Wakeman, Kingcome, Nimpkish	0.021	0.123	0.040	0.063	0.006	0.018	0.028	0.079	0.268	0.073	0.247	0.182
Fraser Early (spring and summers)	Upper Fraser, Mid Fraser, Thompson	NA[2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
West Coast Vancouver Island Falls	WCVI (Artlish, Burman, Kauok, Tahsis, Tashish, Marble)	0.431	0.083	0.060	0.248	0.496[10]	0.488	0.267	0.267	0.906	0.652	0.464	0.178
Puget Sound Natural Summer / Falls	Skagit	NA[2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Stillaguamish	0.194	0.111	0.145	NA	NA	0.027	0.057	0.074	0.192	NA	0.252	0.083
	Snohomish	NA[2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Lake Washington	NA[2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Green River	0.171	0.154	0.350	0.323	0.328	0.162	0.085	0.109	0.076	0.106	0.208	0.151
North / Central B. C.	Yakoun, Nass, Skeena, Area 8	NA[2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Stock Group	Escapement Indicator Stocks	CWT Indices[1]											
		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Washington Coastal Fall Naturals[4]	Hoko, Grays Harbor, Queets, Hoh, Quillayute	NA [2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Columbia River Falls[4]	Upriver Brights	NA [2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Deschutes	NA [2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Lewis[3]	NA [2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Columbia R Summers[4]	Mid-Columbia Summers[3]	NA [2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Far North Migrating OR Coastal Falls[4]	Nehalem[3], Siletz[3], Siuslaw[3]	NA [2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Appendix B.2. ISBM Indices for U.S. fisheries based on CWT-based exploitation rate analysis (1999-2010). Footnotes appear at the end of Appendix B.

Stock Group	Escapement Indicator Stocks	CWT Indices[1]											
		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Washington Coastal Fall Naturals	Hoko	NA [2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Grays Harbor	0.430	1.630	0.860	0.540	0.150	0.530	0.560	0.520	0.790	0.390	0.700	0.69
	Queets	1.000	0.850	1.440	0.840	0.850	0.840	2.050	0.600	1.050	0.610	0.450	0.67
	Hoh	1.540	2.750	1.660	0.950	1.340	1.220	1.030	1.290	2.230	0.950	1.220	1.00
	Quillayute	1.300	2.470	1.480	1.420	0.990	1.150	1.030	1.180	1.470	1.160	1.970	0.67
Columbia River Falls	Upriver Brights	1.370	2.530	1.350	1.320	1.430	1.740	1.780	3.080	3.100	1.830	2.790	1.75
	Deschutes	0.510	0.710	0.520	0.590	0.049	0.510	0.670	0.580	0.510	1.860	2.360	0.79
	Lewis[3]	0.000	0.360	0.580	0.560	1.030	0.170	0.980	1.330	0.790	0.630	0.140	0.43
Puget Sound Natural Summer / Falls	Skagit	NA [2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Stillaguamish	0.120	0.040	0.890	NA	NA	0.010	0.220	0.080	0.120	NA [2]	0.200	0.38
	Snohomish	NA [2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Lake Washington	NA [2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Green R	0.500	0.700	1.180	1.070	1.030	1.010	0.170	0.370	0.380	0.280	0.290	0.34
Fraser Late	Harrison River[3]	0.470	0.130	0.310	0.410	0.640	0.320	NA [12]	NA	NA	0.260	0.150	0.47
Columbia R Summers	Mid-Columbia Summers[3]	1.640	4.820	5.320	7.250	10.040	2.690	6.080	0.480	1.840	6.800	1.310	9.81
Far North Migrating OR Coastal Falls	Nehalem[3]	1.960	1.970	1.940	2.170	3.110	1.800	2.000	3.480	2.010	0.920	0.590	1.21
	Siletz[3]	0.820	1.160	1.190	1.310	1.590	2.290	1.190	2.340	1.600	0.670	0.730	0.50
	Siuslaw[3]	1.220	2.450	2.180	2.560	3.820	1.030	1.630	2.230	1.000	0.640	1.070	0.77
North Puget Sound Natural Springs	Nooksack	0.440	0.000	0.040	NA [2]	NA	NA	NA	NA	NA	0.210	0.520	0.70
	Skagit	NA [2]	NA	NA	1.120	NA	NA	NA	NA	NA	NA	NA	NA

Stock Group	Escapement Indicator Stocks	CWT Indices[1]											
		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Lower Strait of Georgia[4]	Cowichan,	NA [2]	0.690	11.350	5.780	4.990	7.250	10.230	15.070	1.550	4.040	5.140	4.33
	Nanaimo[5]	NA [2]	0.690	11.350	5.780	4.990	NA[7]	NA	NA	NA	NA	NA	NA
Upper Strait of Georgia[4]	Klinaklini, Kakweikan, Wakeman, Kingcome, Nimpkish	NA [2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fraser Early (spring and summers)[4]	Upper Fraser, Mid Fraser, Thompson	NA [2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
West Coast Vancouver Island Falls[4]	WCVI (Artlish, Burman, Kauok, Tahsis, Tashish, Marble)	NA [2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
North / Central B. C.	Yakoun, Nass, Skeena, Area 8	NA [2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Appendix B.3. ISBM Indices for Canadian fisheries, from the Chinook model (1999-2012) used to establish the AI for each year. Order of the stock groups corresponds to Annex 4, Chapter 3, Attachment IV and V of the PST 2008 Revised Annexes. Footnotes appear at the end of Appendix B.

Stock Group	Escapement Indicator Stocks	Model Indices													
		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
		CLB0107	CLB0107	CLB0107	CLB0206	CLB0308	CLB0404	CLB0506	CLB0604	CLB0705	CLB0807	CLB0907	CLB1007	CLB1106	CLB1209
Lower Strait of Georgia	Cowichan	0.304	0.232	0.325	0.541	0.490	0.593	0.381 [8]	0.590 [8]	0.240 [8]	0.315 [8]	0.494 [8]	0.203 [8]	0.367 [8]	0.443 [6]
	Nanaimo[5]	0.209	0.113	0.246	0.190	0.498	0.695								
Fraser Late	Harrison River[3]	0.309	0.198	0.336	0.302	0.352	0.719	0.332	0.294	0.211	0.208	0.245	0.138	0.193	0.256
North Puget Sound	Nooksack	0.233	0.156	0.241	0.195	0.251	0.273	0.314	0.993	0.563	0.470	0.988	0.568	0.732	0.339
Natural Springs	Skagit	NA [2]	NA	NA	NA	0.251	0.273	0.314	0.993	0.563	0.470	0.988	0.568	0.731	0.340
Upper Strait of Georgia	Klinaklini, Kakweikan, Wakeman, Kingcome, Nimpkish	0.174	0.118	0.314	0.272	0.649	0.971	0.649	0.584	0.146	0.622	0.128	0.122	0.578	0.596
Fraser Early (spring and summers)	Upper Fraser, Mid Fraser, Thompson	0.125	0.124	0.210	0.145	0.661	0.718	0.654	0.610	0.159	0.128	0.094	0.121	0.222	0.226
West Coast Vancouver Island Falls	WCVI (Artlish, Burman, Kauok, Tahsis, Tashish, Marble)	0.365	0.327	0.244	0.342	0.744	0.927	0.728	1.082	0.133	1.490	0.137	0.122	0.491	0.636
Puget Sound Natural Summer /	Skagit	0.197	0.119	0.217	0.172	0.436	0.438	0.465	1.092	0.718	0.724	1.097	0.709	0.745	1.421
	Stillaguamish	0.355	0.234	0.469	0.375	0. 513	0.567	0.587	1.166	0.821	0.796	1.123	0.791	0.793	1.329

Stock Group	Escapement Indicator Stocks	Model Indices													
		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
		CLB0107	CLB0107	CLB0107	CLB0206	CLB0308	CLB0404	CLB0506	CLB0604	CLB0705	CLB0807	CLB0907	CLB1007	CLB1106	CLB1209
Falls															
	Snohomish	0.185	0.116	0.222	0.176	0.435	0.445	0.457	1.101	0.736	0.721	1.098	0.718	0.744	1.359
	Lk. Wash.	0.332	0.202	0.355	0.275	0.508	0.446	0.497 [11]	0.898	0.735	0.722	0.918	0.690	0.752	0.991
	Green River	0.333	0.202	0.356	0.275	0.508	0.466	0.497 [11]	0.914	0.752	0.721	0.919	0.670	0.756	1.000
North / Central B. C.	Yakoun, Nass, Skeena, Area 8	0.237	0.254	0.613	0.584	0.689	0.804	0.680	0.626	0.202	0.593	0.224	0.177	0.598	0.536
Washington Coastal Fall Naturals[4]	Hoko, Grays Harbor, Queets, Hoh, Quillayute	0.201	0.161	0.354	0.292	0.292	0.435	0.457	0.363	0.194	0.387	0.328	0.134	0.332	0.357
Columbia River Falls[4]	Upriver Brights	0.124	0.104	0.377	0.429	0.686	0.663	0.640	0.523	0.129	0.612	0.517	0.110	0.620	0.572
	Deschutes	0.124	0.104	0.377	0.429	0.686	0.663	0.640	0.523	0.129	0.612	0.517	0.110	0.620	0.572
	Lewis[3]	0.056	0.180	0.180	0.171	0.515	0.480	0.546	0.315	0.030	0.432	0.832	0.920	0.994	3.345
Columbia R Summers[4]	Mid-Columbia Summers[3]	0.109	0.085	0.144	0.198	0.352	0.333	0.406	0.335	0.119	0.361	0.285	0.084	0.359	0.296
Far North Migr OR Coastal Falls[4]	Nehalem[3], Siletz[3], Siuslaw[3]	0.094	0.110	0.505	0.514	0.689	0.672	0.674	0.515	0.078	0.088	0.543	NA	0.529	0.540

Appendix B.4. ISBM Indices for U.S. fisheries, from the Chinook model (1999-2012) used to establish the AI for each year. Order of the stock groups corresponds to Annex 4, Chapter 3, Attachment IV and V of the PST 2008 Revised Annexes. Footnotes appear at the end of Appendix B.

Stock Group	Escapement Indicator Stocks	Model Indices													
		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
		CLB0107	CLB0107	CLB0107	CLB0206	CLB0308	CLB0404	CLB0506	CLB0604	CLB0705	CLB0807	CLB0907	CLB1007	CLB1106	CLB1209
WA Coastal Fall Naturals	Hoko	0.39	0.34	0.56	0.48	0.682	0.966	0.444	0.442	0.401	0.305	0.284	0.130	0.419	0.378
	Grays Harbor	0.440	0.430	0.450	0.840	0.494	0.573	0.222	0.544	0.504	0.45	0.404	0.382	0.549	0.604
	Queets	0.880	0.420	0.440	1.050	1.063	0.932	1.023	1.022	1.014	1.007	0.508	0.285	0.327	0.179
	Hoh	1.390	0.730	0.760	1.260	1.208	1.214	1.499	1.493	1.111	1.457	0.981	0.987	0.760	0.443
	Quillayute	1.140	0.720	0.750	1.310	1.292	1.139	1.133	0.673	0.883	0.851	0.881	0.963	1.058	1.151
Columbia River Falls	Upriver Brights	1.020	1.090	0.990	0.910	1.022	0.906	0.734	0.814	0.726	0.701	0.798	0.801	0.841	0.894
	Deschutes	1.020	0.880	0.740	0.550	0.561	0.475	0.483	0.437	0.493	0.428	0.461	1.004	1.044	0.684
	Lewis[3]	0.110	0.160	1.700	0.930	0.851	1.008	1.058	1.861	1.466	0.436	0.470	0.505	0.426	0.442
Puget Sound Natural Summer / Falls	Skagit	0.170	0.210	0.780	0.270	0.406	0.157	0.195	0.258	0.325	0.321	0.292	0.261	0.789	0.327
	Stillaguamish	0.140	0.140	0.400	0.200	0.184	0.224	0.185	0.493	0.152	0.137	0.446	0.117	0.169	1.054
	Snohomish	0.040	0.050	0.600	0.150	0.072	0.110	0.891	0.199	0.138	0.165	0.202	0.125	0.211	0.332
	Lake Washington	0.500	0.480	0.590	1.250	0.768	0.411	0.373	0.613	0.391	0.392	0.768	0.517	0.387	0.590
	Green R	0.500	0.480	0.600	0.350	0.263	0.260	0.202	0.361	0.278	0.380	0.555	0.520	0.236	0.631
Fraser Late	Harrison River[3]	0.660	0.390	0.620	0.720	0.981	1.058	0.670	0.787	0.563	0.378	0.410	0.209	0.497	0.448
Columbia R Summers	Mid-Columbia Summers[3]	0.110	0.090	0.140	0.820	0.794	0.715	0.545	0.696	0.943	1.254	1.236	1.142	1.398	1.369
Far North Migrating OR Coastal Falls	Nehalem[3]	2.670	2.660	2.750	2.610	2.346	2.230	2.090	1.912	2.183	1.968	2.003	0.916	2.146	1.696
	Siletz[3]	1.810	1.790	1.870	1.330	1.302	1.288	1.233	1.237	1.399	1.592	1.217	0.698	0.643	0.814
	Siuslaw[3]	0.940	0.930	0.950	3.340	2.856	2.816	2.643	1.095	1.241	0.971	1.632	2.028	1.427	1.646

Stock Group	Escapement Indicator Stocks	Model Indices													
		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
		CLB0107	CLB0107	CLB0107	CLB0206	CLB0308	CLB0404	CLB0506	CLB0604	CLB0705	CLB0807	CLB0907	CLB1007	CLB1106	CLB1209
North Puget Sound Natural Springs	Nooksack	0.150	0.200	0.010	0.000	0.121	0.974	0.222	0.121	NA	NA	0.107	0.181	0.484	0.171
	Skagit	NA[2]	NA	0.070	0.060	0.119	0.663	0.213	0.161	NA	NA	0.143	0.245	0.271	0.147
Lower Strait of Georgia[4]	Cowichan,	0.170	0.210	0.480	0.220	0.452	0.915	0.407[8]	0.271[8]	0.288[8]	0.333[8]	0.367[8]	0.216[8]	0.367[8]	0.370
	Nanaimo[5]	0.170	0.210	0.480	0.220	0.452	0.915								NA
Upper Strait of Georgia[4]	Klinaklini, Kakweikan, Wakeman, Kingcome, Nimpkish	NC[13]	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Fraser Early (spring and summers)[4]	Upper Fraser, Mid Fraser, Thompson	0.080	0.150	0.700	0.150	0.277	0.839	0.257	0.224	0.219	0.100	0.156	0.111	0.239	0.228
West Coast Vancouver Island Falls[4]	WCVI (Artlish, Burman, Kauok, Tahsis, Tashish, Marble)	0.260	0.380	0.730	0.270	0.658	0.540	0.290	0.128	0.311	0.365	0.146	0.213	0.378	0.420
North / Central B. C.	Yakoun, Nass, Skeena, Area 8	NC[13]	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

1 The CWT-based estimates, not the model estimates, are to be used in postseason assessments.
2 NA means not available because of insufficient data (lack of stock specific tag codes, base period CWT recoveries, etc).
3 Stock or stock group with an agreed CTC escapement goal.
4 Stock group not in Annex Attachment IV.
5 Indices for the Nanaimo stock are calculated from CWT recoveries for Cowichan; differences between Nanaimo and Cowichan stock indices are due to

differences in terminal harvest.
6An inconsistency was discovered between the approaches used to calculate the model-based and CWT-based indices. The former included harvest rates for terminal sport while the latter did not. Terminal sport harvest rates are now included in the calculation of both indices. Further review is yet required to determine whether the base period terminal sport harvest rates obtained from analyses of Big Qualicum CWT recoveries adequately represent impacts that would have occurred on Cowichan Chinook.
7 Several problems have been identified in the approach previously used to calculate the CWT-based indices for Nanaimo Chinook; indices for this stock will not be reported as their utility is questionable.
8Although model-based indices were previously calculated separately for Cowichan and Nanaimo Chinook; these did not adequately represent impacts on either LGS stock. This is because the model-based data represent an aggregate of the two stocks and methods do not currently exist to correctly disaggregate these data for calculation of the ISBM values. Until such methods are developed, a single index value only will be reported representing the aggregate.
9 The terminal sport harvest rates for Chilliwack Hatchery Chinook, the indicator stock, were removed from the calculation for the Harrison River naturals this year because sport harvest has been essentially zero on the natural population.
10 A review of the approach used to calculate both the CWT-based and model data-based indices for the WCVI naturals was carried out in 2008. A similar approach was adopted for both indices but due to modifications to the formerly used procedures, the historical time series of values was updated.
11For the Canadian ISBM fisheries, both Lake Washington and Green are assumed to have the same distribution and thus the same index value.
12 The US CWT based indices for Fraser Late from 2005 onward do not accurately reflect the impacts on the natural stock because a considerable proportion of the recoveries in the US fisheries have occurred in mark-selective fisheries in which only clipped hatchery-origin fish are retained. The US indices since 2005 indicate greater impacts than would have occurred on the natural stocks and are no longer being reported.
13 NC means that the current model assumes the stock is not caught in U.S. ISBM fisheries.

Appendix C Percent distribution of landed catch and total mortality among fisheries and escapement for exploitation rate indicator stocks by calendar year with analagous model stocks listed in parentheses.

These data result from cohort analysis of CWT recoveries for the indicator stocks; data within a row for each calendar year sum to 100%. Some changes are present in these distribution tables compared to those presented in previous reports due to changes in the CWT database. Data is not reported for a particular calendar year if there are less than 3 age classes present in the calendar year or if there are less than 10 estimated CWTs in the reported catch and escapement.

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Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	48	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	1735	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	899	3,4,5	40.2%	3.7%	5.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.5%	39.5%
1982	2678	3,4,5,6	21.1%	5.2%	3.4%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%	65.3%
1983	5492	3,4,5,6	25.7%	1.3%	6.4%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	61.5%
1984	10319	3,4,5,6	21.6%	2.6%	12.9%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	59.7%
1985	15929	3,4,5,6	24.4%	5.0%	11.2%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	2.3%	55.0%
1986	16186	3,4,5,6	23.6%	4.3%	11.8%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	4.1%	54.7%
1987	15954	3,4,5,6	27.2%	2.6%	6.7%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	7.9%	54.4%
1988	15080	3,4,5,6	28.0%	1.8%	9.9%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	7.3%	51.5%
1989	11333	3,4,5,6	21.5%	5.0%	8.8%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.9%	6.0%	52.8%
1990	13891	3,4,5,6	31.4%	2.5%	9.6%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%	43.5%
1991	14057	3,4,5,6	35.3%	3.0%	9.7%	0.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.9%	38.9%
1992	6838	3,4,5,6	23.2%	5.6%	11.1%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	12.3%	47.0%
1993	5954	3,4,5,6	18.5%	3.6%	11.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	9.1%	54.9%
1994	5420	3,4,5,6	13.7%	13.1%	11.9%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	4.1%	52.7%
1995	5923	3,4,5,6	24.5%	4.7%	11.3%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.8%	8.3%	41.3%
1996	6132	3,4,5,6	22.2%	4.5%	14.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.2%	15.1%	37.9%
1997	5527	3,4,5,6	23.6%	4.1%	13.5%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.9%	18.0%	36.7%
1998	3642	3,4,5,6	24.5%	6.5%	12.6%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%	15.3%	36.5%
1999	5802	3,4,5,6	18.1%	2.4%	14.2%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%	14.0%	47.8%
2000	6301	3,4,5,6	20.0%	2.7%	12.2%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	11.8%	50.5%
2001	6748	3,4,5,6	14.7%	2.1%	9.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	8.7%	63.1%
2002	5899	3,4,5,6	10.8%	1.7%	7.9%	1.0%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	7.7%	68.0%
2003	5887	3,4,5,6	15.8%	1.6%	8.0%	0.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	63.6%
2004	8268	3,4,5,6	15.7%	4.9%	5.2%	0.4%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	9.4%	63.4%
2005	7827	3,4,5,6	23.3%	5.5%	11.0%	0.3%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	19.9%	39.1%
2006	10251	3,4,5,6	32.4%	3.9%	5.7%	0.7%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	9.7%	45.6%
2007	9956	3,4,5,6	29.3%	3.1%	6.0%	0.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	9.8%	50.2%
2008	9876	3,4,5,6	19.0%	3.4%	3.6%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	14.2%	58.3%
2009	7493	3,4,5,6	14.3%	3.5%	3.7%	0.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	8.1%	64.8%
2010	5653	3,4,5,6	16.0%	4.0%	7.6%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	8.9%	61.8%
1979-2010	8374		22.7%	3.9%	9.2%	0.5%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	9.5%	52.0%
1979-1984	4847		27.1%	3.2%	7.1%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.7%	56.5%
1985-1995	11506		24.7%	4.6%	10.3%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	7.7%	49.7%
1996-1998	5100		23.4%	5.0%	13.7%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.1%	16.1%	37.0%
1999-2010	7497		19.1%	3.2%	7.8%	0.3%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	11.0%	56.4%

Appendix C.2. Percent distribution of Alaska Spring (Alaska South SE) total fishing mortalities among fisheries and escapement.

	Estimated		AABM							ISBM													
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	264	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	2055	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	1136	3,4,5	44.6%	3.3%	11.1%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.9%	31.3%
1982	3088	3,4,5,6	26.7%	5.3%	5.6%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.1%	56.7%
1983	6600	3,4,5,6	34.1%	1.2%	8.3%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	51.2%
1984	12206	3,4,5,6	27.5%	2.5%	16.3%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	50.5%
1985	19356	3,4,5,6	28.2%	9.7%	12.9%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	2.1%	45.2%
1986	19552	3,4,5,6	26.8%	10.1%	12.5%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	3.7%	45.3%
1987	18799	3,4,5,6	33.9%	4.6%	7.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	7.2%	46.2%
1988	17159	3,4,5,6	31.5%	4.3%	10.5%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	6.9%	45.2%
1989	14453	3,4,5,6	22.4%	16.5%	9.5%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	5.0%	41.4%
1990	17329	3,4,5,6	36.6%	6.6%	10.2%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.8%	34.9%
1991	16034	3,4,5,6	37.0%	6.6%	10.0%	0.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%	34.1%
1992	10297	3,4,5,6	18.8%	31.9%	8.8%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	8.6%	31.2%
1993	6836	3,4,5,6	21.5%	7.3%	12.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	8.4%	47.8%
1994	8590	3,4,5,6	14.1%	36.5%	10.1%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.7%	2.8%	33.2%
1995	7459	3,4,5,6	27.1%	12.6%	11.3%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.2%	7.1%	32.8%
1996	6928	3,4,5,6	24.1%	7.4%	15.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.9%	14.1%	33.5%
1997	6116	3,4,5,6	24.7%	6.3%	14.7%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%	17.2%	33.1%
1998	4352	3,4,5,6	25.3%	11.6%	13.8%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%	13.9%	30.5%
1999	6721	3,4,5,6	20.8%	3.7%	17.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	13.4%	41.3%
2000	7234	3,4,5,6	23.4%	4.5%	13.4%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.7%	11.4%	44.0%
2001	7322	3,4,5,6	17.1%	3.4%	10.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	8.6%	58.2%
2002	6432	3,4,5,6	12.8%	2.5%	9.9%	1.1%	0.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	7.8%	62.3%
2003	6327	3,4,5,6	17.8%	2.1%	9.7%	0.8%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.1%	59.2%
2004	9154	3,4,5,6	17.9%	7.1%	6.5%	0.5%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	9.3%	57.3%
2005	9212	3,4,5,6	26.3%	7.3%	13.2%	0.4%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	18.6%	33.2%
2006	11531	3,4,5,6	35.4%	4.7%	6.8%	0.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	9.5%	40.5%
2007	11435	3,4,5,6	31.5%	6.7%	6.6%	0.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	9.5%	43.7%
2008	10553	3,4,5,6	21.0%	4.4%	4.2%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	14.3%	54.6%
2009	8200	3,4,5,6	17.2%	4.8%	4.3%	0.5%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.7%	8.1%	59.2%
2010	6224	3,4,5,6	18.4%	6.5%	8.3%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	8.8%	56.2%
1979-2010	9888		25.5%	8.1%	10.4%	0.5%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	8.8%	44.5%
1979-1984	5758		33.2%	3.1%	10.3%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.5%	47.4%
1985-1995	14169		27.1%	13.3%	10.5%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	6.6%	39.8%
1996-1998	5799		24.7%	8.4%	14.7%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%	15.1%	32.4%
1999-2010	8362		21.6%	4.8%	9.2%	0.4%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	10.8%	50.8%

Appendix C.3. Percent distribution of Atnarko River (North/Central BC) reported catch among fisheries and escapement.

	Estimated		AABM							ISBM													
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	1	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	18	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	122	2,3,4	16.4%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	17.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%	0.0%	59.8%
1991	719	2,3,4,5	5.8%	0.0%	0.0%	1.0%	1.8%	0.4%	0.0%	0.0%	0.0%	0.4%	21.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%	0.8%	64.8%
1992	943	2,3,4,5,6	7.3%	0.0%	0.0%	1.5%	3.3%	0.3%	0.0%	0.0%	0.0%	4.6%	18.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	1.8%	58.6%
1993	1293	2,3,4,5,6	8.7%	0.4%	0.5%	3.7%	3.2%	0.4%	0.0%	0.0%	0.0%	1.0%	13.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	2.1%	64.2%
1994	1647	2,3,4,5,6	6.1%	0.1%	0.2%	1.3%	2.1%	0.0%	0.0%	0.0%	0.0%	2.2%	18.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	0.8%	66.6%
1995	2272	2,3,4,5,6	3.9%	0.0%	1.1%	0.9%	3.1%	0.0%	0.0%	0.0%	0.0%	0.3%	15.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.4%	2.6%	67.3%
1996	2001	2,3,4,5,6	2.4%	0.0%	0.5%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	11.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.5%	4.4%	74.2%
1997	1138	2,3,4,5,6	3.9%	0.0%	1.2%	0.4%	3.0%	0.0%	0.0%	0.0%	0.0%	0.2%	9.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.5%	4.2%	69.4%
1998	1026	2,3,4,5,6	6.2%	0.0%	0.4%	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%	0.0%	13.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.5%	2.9%	61.2%
1999	1424	2,3,4,5,6	5.3%	0.0%	2.4%	0.0%	3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	7.2%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	4.2%	3.5%	73.4%
2000	1025	2,3,4,5,6	6.0%	0.1%	0.0%	0.0%	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%	7.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.1%	3.9%	72.2%
2001	670	2,3,4,5,6	5.4%	0.0%	1.3%	0.0%	2.5%	0.3%	0.0%	0.0%	0.0%	0.0%	14.5%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	9.0%	3.9%	63.0%
2002	730	2,3,4,5,6	4.7%	0.1%	0.5%	8.1%	4.9%	1.0%	0.0%	0.0%	0.0%	0.0%	16.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.4%	2.2%	54.2%
2003	607	2,3,4,5,6	4.4%	0.2%	0.0%	2.5%	13.2%	0.0%	0.0%	0.0%	0.0%	0.0%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.1%	3.8%	43.7%
2004	645	2,3,4,5,6	8.4%	0.0%	0.0%	3.1%	8.8%	0.0%	0.0%	0.0%	0.0%	0.0%	22.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.7%	1.6%	47.4%
2005	898	3,4,5,6	12.6%	0.1%	0.8%	4.3%	14.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.3%	2.0%	42.5%
2006	1404	4,5,6	8.4%	0.0%	1.1%	2.2%	7.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.4%	2.3%	65.7%
2007	391	2,5,6	10.5%	0.0%	2.3%	1.0%	7.4%	0.5%	0.0%	0.0%	0.0%	0.0%	17.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.4%	2.3%	52.4%
2008	136	2,3,6	0.7%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.4%	0.0%	83.8%
2009	672	2,3,4	7.3%	0.0%	0.0%	2.4%	4.9%	0.0%	0.0%	0.0%	0.0%	0.0%	22.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	13.7%	2.4%	46.4%
2010	780	3,4,5	9.7%	0.1%	0.6%	2.6%	7.9%	0.0%	0.0%	0.0%	0.0%	0.0%	13.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.8%	1.9%	53.1%
1979-2010	978		6.9%	0.1%	0.7%	1.7%	4.8%	0.1%	0.0%	0.0%	0.0%	0.5%	15.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.5%	2.4%	61.2%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	1166		8.0%	0.4%	0.3%	1.4%	2.3%	0.2%	0.0%	0.0%	0.0%	1.7%	17.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.4%	1.4%	63.6%
1996-1998	1388		4.2%	0.0%	0.7%	0.1%	3.3%	0.0%	0.0%	0.0%	0.0%	0.1%	11.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.2%	3.8%	68.3%
1999-2010	782		6.9%	0.1%	0.8%	2.2%	6.4%	0.1%	0.0%	0.0%	0.0%	0.0%	15.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.7%	2.5%	58.2%

Appendix C.4. Percent distribution of Atnarko River (North/Central BC) total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM														Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal				
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	5	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	37	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	145	2,3,4	20.7%	4.1%	0.0%	1.4%	1.4%	0.7%	0.0%	0.0%	0.0%	4.1%	14.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	50.3%
1991	749	2,3,4,5	7.7%	0.1%	0.0%	1.6%	2.1%	0.4%	0.0%	0.0%	0.0%	0.9%	20.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%	0.8%	62.2%
1992	979	2,3,4,5,6	8.9%	0.0%	0.0%	1.7%	3.7%	0.3%	0.0%	0.0%	0.0%	5.2%	18.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.6%	1.8%	56.5%
1993	1359	2,3,4,5,6	10.5%	0.9%	0.6%	4.4%	3.6%	0.4%	0.0%	0.0%	0.0%	1.2%	13.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	2.1%	61.1%
1994	1701	2,3,4,5,6	7.6%	0.2%	0.3%	1.5%	2.3%	0.0%	0.0%	0.0%	0.0%	2.6%	18.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	0.8%	64.5%
1995	2405	2,3,4,5,6	4.4%	0.1%	1.1%	1.0%	3.6%	0.0%	0.0%	0.0%	0.0%	0.3%	18.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.1%	2.6%	63.6%
1996	2078	2,3,4,5,6	2.6%	0.0%	0.5%	0.2%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	13.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	4.5%	71.5%
1997	1195	2,3,4,5,6	4.4%	0.0%	1.5%	0.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.2%	10.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.2%	4.3%	66.1%
1998	1094	2,3,4,5,6	7.1%	0.0%	0.5%	0.0%	6.9%	0.0%	0.0%	0.0%	0.0%	0.0%	15.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	2.9%	57.4%
1999	1462	2,3,4,5,6	5.8%	0.0%	2.5%	0.0%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%	7.7%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	4.1%	3.6%	71.5%
2000	1055	2,3,4,5,6	6.4%	0.1%	0.0%	0.0%	3.9%	0.0%	0.0%	0.0%	0.0%	0.0%	7.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.9%	4.1%	70.1%
2001	716	2,3,4,5,6	6.6%	0.0%	1.5%	0.0%	3.4%	0.4%	0.0%	0.0%	0.0%	0.0%	16.6%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	8.5%	3.9%	58.9%
2002	782	2,3,4,5,6	5.0%	0.1%	0.5%	8.7%	6.5%	0.9%	0.0%	0.0%	0.0%	0.0%	18.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.9%	2.2%	50.6%
2003	688	2,3,4,5,6	4.5%	0.1%	0.0%	2.6%	17.7%	0.0%	0.0%	0.0%	0.0%	0.0%	25.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.1%	3.6%	38.5%
2004	722	2,3,4,5,6	9.4%	0.0%	0.0%	3.5%	12.7%	0.0%	0.0%	0.0%	0.0%	0.0%	22.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.8%	1.5%	42.4%
2005	978	3,4,5,6	12.5%	0.1%	0.8%	4.4%	16.8%	0.0%	0.0%	0.0%	0.0%	0.0%	17.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.7%	1.9%	39.1%
2006	1463	4,5,6	8.5%	0.0%	1.1%	2.2%	8.1%	0.0%	0.0%	0.0%	0.0%	0.0%	10.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.2%	2.3%	63.1%
2007	471	2,5,6	10.0%	0.0%	2.1%	1.1%	8.7%	0.4%	0.0%	0.0%	0.0%	0.0%	26.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	2.1%	43.5%
2008	151	2,3,6	6.0%	0.0%	0.7%	1.3%	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%	9.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%	0.0%	75.5%
2009	796	2,3,4	7.3%	0.0%	0.0%	2.4%	5.3%	0.0%	0.0%	0.0%	0.0%	0.0%	32.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.7%	2.1%	39.2%
2010	816	3,4,5	9.9%	0.1%	0.6%	2.8%	9.7%	0.0%	0.0%	0.0%	0.0%	0.0%	13.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.4%	2.0%	50.7%
1979-2010	1038		7.9%	0.3%	0.7%	2.0%	6.2%	0.2%	0.0%	0.0%	0.0%	0.7%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.1%	2.4%	57.0%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	1223		10.0%	0.9%	0.3%	1.9%	2.8%	0.3%	0.0%	0.0%	0.0%	2.4%	17.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	1.4%	59.7%
1996-1998	1456		4.7%	0.0%	0.8%	0.2%	4.3%	0.0%	0.0%	0.0%	0.0%	0.1%	13.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.8%	3.9%	65.0%
1999-2010	842		7.7%	0.0%	0.8%	2.4%	8.3%	0.1%	0.0%	0.0%	0.0%	0.0%	17.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.1%	2.5%	53.6%

Appendix C.5. Percent distribution of Big Qualicum River Fall (Lower Strait of Georgia Hatchery and Natural) reported catch among fisheries and escapement.

	Estimated		AABM							ISBM													
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	4737	2,3,4,5	3.4%	0.7%	0.3%	1.7%	0.4%	2.2%	0.1%	21.2%	15.3%	9.4%	12.1%	0.0%	0.0%	0.0%	0.1%	0.3%	0.0%	0.0%	0.0%	2.8%	29.9%
1980	2736	2,3,4,5	1.3%	1.8%	0.4%	4.3%	1.4%	4.2%	0.0%	15.2%	20.1%	6.6%	12.8%	0.0%	0.1%	0.0%	0.0%	0.3%	0.2%	0.0%	0.0%	3.7%	27.7%
1981	1423	2,3,4,5	1.9%	0.1%	0.4%	1.3%	0.8%	1.5%	0.3%	17.8%	33.5%	11.4%	14.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.6%	0.0%	0.0%	4.1%	12.2%
1982	740	2,3,4,5	4.5%	0.7%	1.2%	4.5%	0.4%	4.3%	0.0%	12.7%	11.2%	5.8%	20.4%	0.0%	0.0%	0.0%	0.0%	1.1%	0.7%	0.0%	0.0%	1.6%	30.9%
1983	625	2,3,4,5	5.3%	0.3%	0.3%	5.0%	1.0%	1.1%	0.0%	13.4%	14.9%	6.9%	19.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	8.3%	23.8%
1984	495	2,3,4,5	1.4%	0.4%	0.0%	1.4%	5.7%	1.4%	0.0%	8.9%	38.8%	6.7%	9.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.6%	20.8%
1985	696	2,3,4,5	3.6%	1.4%	0.0%	1.7%	1.7%	1.4%	0.0%	1.7%	24.1%	3.7%	19.1%	0.0%	0.0%	0.0%	0.0%	2.6%	0.0%	0.0%	0.0%	9.6%	29.2%
1986	1203	2,3,4,5	1.9%	0.1%	0.0%	0.7%	2.8%	1.4%	0.0%	8.1%	30.8%	12.6%	15.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.7%	20.1%
1987	738	2,3,4,5	8.7%	0.0%	0.9%	3.9%	2.7%	4.2%	0.0%	2.0%	22.6%	2.4%	7.7%	0.0%	0.8%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	6.6%	36.6%
1988	396	2,3,4,5	2.8%	1.0%	0.0%	2.3%	1.3%	2.8%	2.0%	1.8%	25.3%	1.3%	14.6%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	5.1%	38.9%
1989	501	2,3,4,5	4.2%	1.6%	0.6%	3.2%	1.8%	4.8%	0.0%	1.8%	19.4%	0.6%	9.2%	0.0%	0.2%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	18.0%	33.7%
1990	633	2,3,4,5	4.7%	2.1%	0.0%	6.0%	2.4%	3.0%	0.0%	3.5%	14.5%	1.6%	17.9%	0.0%	0.2%	0.0%	0.0%	0.0%	1.9%	0.0%	0.0%	4.6%	37.8%
1991	627	2,3,4,5	2.4%	1.6%	0.0%	2.1%	2.1%	1.9%	0.0%	5.3%	28.1%	1.1%	8.5%	0.0%	0.5%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	10.8%	35.2%
1992	560	2,3,4,5	2.3%	0.7%	2.5%	5.4%	7.3%	3.4%	0.0%	8.9%	26.3%	5.9%	5.5%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	5.9%	25.5%
1993	407	2,3,4,5	1.2%	1.2%	0.0%	1.5%	2.7%	1.7%	0.0%	3.4%	37.1%	3.9%	9.8%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	4.7%	31.7%
1994	253	2,3,4,5	4.3%	0.0%	0.0%	1.6%	2.0%	2.8%	0.0%	4.3%	23.3%	1.6%	6.3%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	0.0%	0.0%	5.9%	45.1%
1995	200	2,3,4,5	7.0%	0.0%	0.0%	1.5%	2.5%	0.0%	0.0%	0.0%	11.0%	0.0%	7.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.5%	61.0%
1996	280	2,3,4,5	2.9%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.0%	44.3%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	2.1%	47.9%
1997	200	2,3,4,5	3.0%	0.0%	0.0%	5.0%	1.5%	0.0%	4.5%	1.0%	9.0%	1.5%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.5%	52.0%
1998	184	2,3,4,5	7.1%	0.5%	0.0%	0.0%	5.4%	0.0%	0.0%	0.0%	10.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.7%	67.4%
1999	260	2,3,4,5	5.4%	1.2%	0.0%	3.5%	3.8%	0.0%	3.5%	0.0%	8.8%	3.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	2.3%	67.3%
2000	222	2,3,4,5	14.0%	0.9%	0.0%	0.0%	2.3%	0.0%	0.0%	0.0%	7.7%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	3.2%	0.0%	0.0%	0.0%	3.6%	68.0%
2001	462	2,3,4,5	4.1%	6.9%	0.0%	0.0%	9.5%	0.6%	0.0%	0.0%	8.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	0.0%	0.0%	0.0%	2.2%	66.5%
2002	295	2,3,4,5	10.2%	0.0%	3.1%	3.4%	5.8%	2.4%	3.1%	0.0%	5.8%	0.0%	0.3%	0.0%	0.0%	0.0%	1.0%	2.0%	0.0%	0.0%	0.0%	3.4%	59.7%
2003	244	2,3,4,5	7.8%	0.4%	1.6%	0.0%	11.9%	3.3%	0.0%	0.0%	8.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	66.4%
2004	363	2,3,4,5	7.2%	0.0%	0.3%	5.0%	2.8%	1.7%	0.0%	0.0%	5.8%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.6%	74.9%
2005	516	2,3,4,5	8.5%	0.4%	0.0%	1.9%	12.0%	5.2%	2.7%	0.0%	5.8%	0.0%	0.8%	0.0%	0.6%	0.0%	0.6%	2.9%	0.0%	0.0%	0.0%	1.4%	57.2%
2006	582	2,3,4,5	4.1%	2.1%	0.9%	1.4%	4.3%	0.5%	0.0%	0.0%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.2%	0.0%	0.0%	0.0%	3.3%	79.4%
2007	557	2,3,4,5	10.8%	0.2%	0.4%	5.0%	7.4%	0.7%	2.2%	0.0%	5.2%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.0%	4.8%	61.9%
2008	386	2,3,4,5	4.4%	0.8%	0.3%	1.6%	6.7%	1.0%	6.7%	0.0%	6.2%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	1.8%	3.1%	0.0%	0.0%	2.1%	64.8%
2009	503	2,3,4,5	3.6%	4.4%	0.0%	1.8%	3.2%	1.6%	4.8%	0.0%	7.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	1.0%	0.6%	0.0%	0.0%	2.4%	69.2%
2010	427	2,3,4,5	6.1%	0.2%	1.2%	1.4%	7.3%	1.2%	3.3%	0.0%	10.1%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	66.0%
1979-2010	702		5.0%	1.0%	0.4%	2.4%	3.9%	1.9%	1.0%	4.1%	17.0%	2.7%	6.7%	0.0%	0.2%	0.0%	0.1%	0.9%	0.3%	0.0%	0.0%	5.3%	47.1%
1979-1984	1793		3.0%	0.7%	0.4%	3.0%	1.6%	2.5%	0.1%	14.9%	22.3%	7.8%	14.7%	0.0%	0.0%	0.0%	0.0%	0.3%	0.3%	0.0%	0.0%	4.2%	24.2%
1985-1995	565		3.9%	0.9%	0.4%	2.7%	2.7%	2.5%	0.2%	3.7%	23.9%	3.2%	11.1%	0.0%	0.1%	0.0%	0.0%	0.7%	0.4%	0.0%	0.0%	7.9%	35.9%
1996-1998	221		4.3%	0.2%	0.0%	1.7%	2.7%	0.0%	1.5%	0.3%	21.4%	0.5%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	10.4%	55.7%
1999-2010	401		7.2%	1.5%	0.6%	2.1%	6.4%	1.5%	2.2%	0.0%	6.9%	0.3%	0.2%	0.0%	0.3%	0.0%	0.2%	1.5%	0.3%	0.0%	0.0%	2.2%	66.8%

Appendix C.6. Percent distribution of Big Qualicum River Fall (Lower Strait of Georgia Hatchery and Natural) total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	5102	2,3,4,5	4.4%	0.7%	0.5%	1.9%	0.4%	2.5%	0.1%	20.9%	15.2%	10.5%	11.9%	0.0%	0.0%	0.0%	0.1%	0.3%	0.0%	0.0%	0.0%	2.7%	27.8%
1980	2929	2,3,4,5	1.5%	1.8%	0.4%	4.6%	1.5%	4.7%	0.0%	15.2%	20.1%	7.1%	12.9%	0.0%	0.2%	0.0%	0.0%	0.3%	0.2%	0.0%	0.0%	3.7%	25.8%
1981	1545	2,3,4,5	2.4%	0.1%	0.4%	1.5%	0.8%	1.7%	0.3%	17.5%	32.9%	12.3%	14.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.6%	0.0%	0.0%	4.0%	11.2%
1982	789	2,3,4,5	5.4%	0.8%	1.4%	4.7%	0.4%	4.6%	0.0%	12.5%	11.3%	6.1%	20.3%	0.0%	0.0%	0.0%	0.0%	1.1%	0.8%	0.0%	0.0%	1.6%	29.0%
1983	695	2,3,4,5	5.5%	0.3%	0.7%	5.0%	1.2%	1.2%	0.0%	14.5%	15.3%	7.1%	18.7%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	8.2%	21.4%
1984	559	2,3,4,5	2.0%	0.4%	0.0%	1.4%	6.4%	1.6%	0.0%	9.1%	39.4%	7.0%	9.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.7%	18.4%
1985	841	2,3,4,5	6.3%	4.3%	0.0%	2.0%	2.0%	1.5%	0.0%	2.1%	23.8%	4.2%	17.8%	0.0%	0.0%	0.0%	0.0%	3.1%	0.0%	0.0%	0.0%	8.7%	24.1%
1986	1347	2,3,4,5	3.0%	0.4%	0.0%	0.8%	2.8%	1.4%	0.0%	9.9%	29.9%	13.5%	14.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.5%	18.0%
1987	801	2,3,4,5	10.2%	0.0%	1.0%	4.2%	2.9%	4.6%	0.0%	2.1%	22.8%	2.6%	7.5%	0.0%	0.9%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	6.6%	33.7%
1988	547	2,3,4,5	2.4%	1.8%	0.0%	2.2%	1.1%	2.7%	1.6%	1.6%	39.5%	1.1%	12.1%	0.0%	0.0%	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%	4.4%	28.2%
1989	626	2,3,4,5	4.3%	5.6%	0.8%	3.5%	1.8%	5.0%	0.0%	1.9%	22.5%	0.5%	7.8%	0.0%	0.3%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	17.9%	27.0%
1990	780	2,3,4,5	4.9%	4.7%	0.0%	6.3%	2.4%	3.1%	0.0%	3.7%	19.4%	1.5%	16.2%	0.0%	0.1%	0.0%	0.0%	0.0%	2.6%	0.0%	0.0%	4.5%	30.6%
1991	785	2,3,4,5	2.8%	3.7%	0.0%	2.3%	1.9%	2.0%	0.0%	5.7%	33.4%	1.1%	7.3%	0.0%	0.5%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	10.7%	28.2%
1992	743	2,3,4,5	3.4%	5.5%	2.6%	5.2%	6.5%	3.2%	0.0%	9.2%	29.6%	5.5%	4.4%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	5.2%	19.2%
1993	517	2,3,4,5	1.5%	2.3%	0.0%	1.5%	2.5%	1.7%	0.0%	3.9%	43.3%	4.1%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	4.6%	25.0%
1994	281	2,3,4,5	5.0%	0.0%	0.0%	1.8%	1.8%	2.8%	0.0%	4.6%	26.7%	1.8%	5.7%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	0.0%	0.0%	6.4%	40.6%
1995	247	2,3,4,5	6.9%	0.0%	0.0%	1.6%	3.6%	0.0%	0.0%	0.0%	17.4%	0.0%	10.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.1%	49.4%
1996	371	2,3,4,5	3.0%	0.0%	0.0%	0.5%	0.8%	0.3%	0.0%	0.0%	55.0%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	2.2%	36.1%
1997	233	2,3,4,5	3.9%	0.0%	0.0%	5.6%	2.1%	0.0%	4.3%	0.9%	10.7%	1.7%	4.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	21.5%	44.6%
1998	207	2,3,4,5	7.2%	1.0%	0.0%	0.0%	7.7%	0.0%	0.0%	0.0%	14.5%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.2%	59.9%
1999	292	2,3,4,5	6.2%	1.7%	0.0%	3.8%	5.1%	0.0%	3.8%	0.0%	12.7%	3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	2.4%	59.9%
2000	249	2,3,4,5	16.1%	1.6%	0.0%	0.0%	3.2%	0.0%	0.0%	0.0%	10.4%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	3.6%	0.0%	0.0%	0.0%	4.0%	60.6%
2001	548	2,3,4,5	4.6%	13.1%	0.0%	0.0%	12.2%	0.5%	0.0%	0.0%	9.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%	0.0%	2.2%	56.0%
2002	341	2,3,4,5	11.1%	0.0%	3.2%	3.5%	7.0%	2.1%	3.2%	0.0%	6.7%	0.0%	5.0%	0.0%	0.0%	0.0%	0.9%	2.1%	0.0%	0.0%	0.0%	3.5%	51.6%
2003	285	2,3,4,5	8.4%	0.7%	2.1%	0.0%	16.8%	3.2%	0.0%	0.0%	11.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	56.8%
2004	396	2,3,4,5	8.6%	0.0%	0.3%	5.8%	4.3%	1.5%	0.0%	0.0%	8.1%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	1.5%	0.0%	0.0%	0.0%	0.8%	68.7%
2005	612	2,3,4,5	9.5%	0.5%	0.0%	2.0%	17.0%	5.1%	2.9%	0.0%	7.8%	0.0%	1.0%	0.0%	0.5%	0.0%	0.7%	3.4%	0.0%	0.0%	0.0%	1.5%	48.2%
2006	624	2,3,4,5	5.3%	3.8%	1.0%	1.6%	5.0%	0.6%	0.0%	0.0%	4.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.2%	0.0%	0.0%	0.0%	3.7%	74.0%
2007	627	2,3,4,5	12.3%	0.5%	0.5%	5.3%	9.7%	0.6%	2.2%	0.0%	6.5%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	5.3%	55.0%
2008	439	2,3,4,5	5.7%	0.9%	0.5%	1.8%	7.7%	0.9%	7.1%	0.0%	9.1%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	2.1%	4.3%	0.0%	0.0%	2.5%	56.9%
2009	553	2,3,4,5	4.7%	5.6%	0.0%	2.0%	4.0%	1.6%	5.1%	0.0%	9.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.9%	0.9%	0.0%	0.0%	2.7%	62.9%
2010	471	2,3,4,5	7.0%	0.2%	1.3%	1.5%	9.1%	1.1%	3.8%	0.0%	12.5%	0.0%	0.0%	0.0%	1.9%	0.0%	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%	59.9%
1979-2010	793		5.8%	1.9%	0.5%	2.6%	4.7%	1.9%	1.1%	4.2%	19.7%	2.9%	6.7%	0.0%	0.2%	0.0%	0.1%	0.9%	0.4%	0.0%	0.0%	5.3%	40.9%
1979-1984	1936		3.5%	0.7%	0.6%	3.2%	1.8%	2.7%	0.1%	15.0%	22.4%	8.3%	14.6%	0.0%	0.0%	0.0%	0.0%	0.3%	0.4%	0.0%	0.0%	4.2%	22.3%
1985-1995	683		4.6%	2.6%	0.4%	2.9%	2.7%	2.6%	0.1%	4.1%	28.0%	3.3%	10.2%	0.0%	0.2%	0.0%	0.0%	0.8%	0.4%	0.0%	0.0%	7.7%	29.4%
1996-1998	270		4.7%	0.3%	0.0%	2.0%	3.6%	0.1%	1.4%	0.3%	26.7%	0.6%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	10.9%	46.9%
1999-2010	453		8.3%	2.4%	0.7%	2.3%	8.4%	1.4%	2.3%	0.0%	9.1%	0.3%	0.6%	0.0%	0.3%	0.0%	0.2%	1.6%	0.4%	0.0%	0.0%	2.4%	59.2%

Appendix C.7. Percent distribution of Chilliwack River Fall (Fraser Late) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	2415	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	4260	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	2006	2,3,4	0.5%	0.0%	0.0%	0.3%	0.2%	34.5%	0.0%	5.4%	22.5%	2.3%	6.7%	0.0%	4.0%	0.0%	0.4%	4.2%	3.3%	0.0%	0.0%	0.9%	14.6%
1986	1816	2,3,4,5	0.0%	0.0%	0.0%	0.8%	0.2%	19.5%	0.0%	7.8%	19.3%	2.5%	14.1%	0.0%	2.6%	0.0%	0.2%	4.0%	5.6%	0.0%	0.0%	1.1%	22.2%
1987	2366	2,3,4,5	0.0%	0.0%	0.0%	0.7%	0.3%	16.2%	0.5%	14.6%	19.5%	0.4%	2.6%	0.0%	3.8%	0.0%	0.2%	3.8%	2.5%	0.0%	0.0%	1.3%	33.5%
1988	2167	2,3,4,5	0.4%	0.1%	0.0%	0.2%	0.0%	17.9%	0.0%	6.6%	10.6%	0.0%	2.4%	0.0%	4.2%	0.0%	0.1%	3.0%	1.7%	0.0%	0.0%	2.6%	50.3%
1989	1036	2,3,4,5	0.3%	0.0%	0.0%	0.0%	0.0%	19.5%	0.0%	1.4%	15.3%	0.0%	4.2%	0.0%	5.3%	0.0%	0.2%	3.8%	1.2%	0.0%	0.0%	0.7%	48.3%
1990	1298	2,3,4,5	0.8%	0.0%	0.0%	0.0%	0.3%	9.4%	2.4%	3.6%	10.5%	0.2%	6.0%	0.0%	6.2%	0.0%	0.5%	12.0%	4.9%	0.0%	0.0%	1.4%	41.8%
1991	2498	2,3,4,5	0.2%	0.1%	0.0%	0.4%	0.1%	18.2%	0.7%	7.7%	12.4%	0.2%	6.1%	0.0%	13.3%	0.0%	0.1%	5.2%	4.5%	0.0%	0.0%	1.7%	29.2%
1992	3730	2,3,4,5	0.3%	0.0%	0.0%	0.1%	0.2%	18.0%	0.1%	5.3%	9.6%	0.6%	1.7%	0.0%	8.2%	0.0%	0.1%	0.9%	3.2%	0.0%	0.0%	1.2%	50.5%
1993	1848	2,3,4,5	0.2%	0.0%	0.0%	0.0%	0.3%	11.9%	0.4%	6.5%	6.3%	0.0%	1.5%	0.0%	7.1%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	2.0%	62.9%
1994	621	2,3,4,5	0.3%	0.2%	0.0%	0.6%	0.0%	6.8%	2.4%	2.7%	4.3%	0.3%	6.9%	0.0%	1.6%	0.0%	0.0%	3.7%	3.5%	0.0%	0.0%	6.3%	60.2%
1995	1995	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.2%	8.7%	0.5%	0.0%	5.3%	0.0%	2.8%	0.0%	1.2%	0.0%	0.0%	1.1%	1.7%	0.0%	0.0%	1.1%	77.7%
1996	1474	2,3,4,5	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	13.3%	0.0%	2.0%	0.0%	4.5%	0.0%	0.0%	0.9%	2.7%	0.0%	0.0%	2.4%	73.5%
1997	2154	2,3,4,5	0.6%	0.0%	0.0%	0.1%	0.5%	10.0%	1.9%	0.0%	11.9%	0.5%	3.5%	0.0%	4.8%	0.0%	0.1%	2.3%	3.2%	0.0%	0.0%	2.6%	57.8%
1998	3101	2,3,4,5	0.4%	0.0%	0.0%	0.0%	0.2%	0.2%	0.3%	0.0%	2.7%	0.0%	0.2%	0.0%	3.0%	0.0%	0.0%	0.3%	0.4%	0.0%	0.0%	1.2%	91.1%
1999	3173	2,3,4,5	0.1%	0.0%	0.0%	0.2%	0.1%	0.3%	1.9%	0.0%	8.7%	0.0%	0.4%	0.0%	11.6%	0.0%	0.5%	0.7%	0.4%	0.0%	0.0%	1.6%	73.6%
2000	2572	2,3,4,5	0.1%	0.0%	0.0%	0.0%	0.3%	5.4%	2.4%	0.0%	3.3%	0.0%	0.0%	0.0%	3.8%	0.0%	0.0%	0.5%	0.4%	0.0%	0.0%	2.4%	81.3%
2001	3812	2,3,4,5	0.1%	0.1%	0.0%	0.0%	0.2%	3.5%	1.4%	0.0%	5.5%	0.0%	0.2%	0.0%	5.5%	0.0%	0.3%	0.8%	2.2%	0.0%	0.0%	13.2%	66.9%
2002	4853	2,3,4,5	0.2%	0.0%	0.0%	0.1%	0.2%	8.4%	4.3%	0.0%	3.0%	0.0%	0.6%	0.0%	6.9%	0.0%	1.1%	0.3%	1.3%	0.0%	0.0%	5.2%	68.5%
2003	4480	2,3,4,5	0.2%	0.0%	0.0%	0.0%	0.2%	5.7%	2.3%	0.0%	2.5%	0.0%	0.3%	0.0%	7.5%	0.0%	0.4%	0.3%	0.8%	0.0%	0.0%	6.3%	73.6%
2004	6580	2,3,4,5	0.1%	0.0%	0.0%	0.1%	0.0%	5.0%	2.1%	0.0%	0.7%	0.0%	0.7%	0.0%	6.0%	0.0%	0.2%	0.1%	0.7%	0.0%	0.0%	4.6%	79.7%
2005	3909	2,3,4,5	0.0%	0.0%	0.0%	0.1%	0.2%	7.4%	3.8%	0.0%	3.0%	0.0%	3.4%	0.0%	3.4%	0.0%	0.8%	0.8%	0.5%	0.0%	0.0%	5.8%	70.8%
2006	2918	2,3,4,5	0.0%	0.0%	0.0%	0.4%	0.0%	7.2%	1.9%	0.0%	2.0%	0.0%	0.6%	0.0%	2.3%	0.0%	0.3%	0.2%	1.1%	0.0%	0.0%	4.3%	79.9%
2007	1675	2,3,4,5	0.0%	0.0%	0.0%	0.2%	0.0%	7.3%	2.8%	0.0%	0.8%	0.0%	2.8%	0.0%	2.1%	0.0%	0.1%	0.5%	0.5%	0.0%	0.2%	5.7%	76.8%
2008	2720	2,3,4,5	0.2%	0.0%	0.0%	0.0%	0.0%	11.0%	4.5%	0.0%	1.5%	0.0%	0.8%	0.0%	3.9%	0.0%	1.6%	0.8%	1.5%	0.0%	0.0%	9.6%	64.5%
2009	2691	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	2.8%	0.0%	2.2%	0.0%	3.3%	0.0%	0.6%	0.0%	0.3%	0.9%	1.3%	0.0%	0.0%	12.3%	74.8%
2010	5029	2,3,4,5	0.2%	0.0%	0.0%	0.1%	0.0%	3.1%	2.7%	0.0%	5.4%	0.0%	1.9%	0.0%	3.6%	0.0%	1.1%	0.9%	1.5%	0.0%	0.0%	6.4%	73.2%
1979-2010	2789		0.2%	0.0%	0.0%	0.2%	0.1%	9.9%	1.6%	2.4%	7.8%	0.3%	2.9%	0.0%	4.9%	0.0%	0.3%	2.0%	2.0%	0.0%	0.0%	4.0%	61.4%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	1944		0.3%	0.0%	0.0%	0.3%	0.2%	16.4%	0.6%	5.6%	12.3%	0.6%	5.0%	0.0%	5.2%	0.0%	0.2%	3.8%	3.0%	0.0%	0.0%	1.8%	44.7%
1996-1998	2243		0.4%	0.0%	0.0%	0.0%	0.2%	3.4%	0.8%	0.0%	9.3%	0.2%	1.9%	0.0%	4.1%	0.0%	0.0%	1.2%	2.1%	0.0%	0.0%	2.1%	74.2%
1999-2010	3701		0.1%	0.0%	0.0%	0.1%	0.1%	5.5%	2.7%	0.0%	3.2%	0.0%	1.3%	0.0%	4.8%	0.0%	0.6%	0.6%	1.0%	0.0%	0.0%	6.4%	73.6%

Appendix C.8. Percent distribution of Chilliwack River Fall (Fraser Late) total fishing mortalities among fisheries and escapement.

	Estimated		AABM							ISBM													
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	3143	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	4631	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	2260	2,3,4	1.1%	0.1%	0.0%	0.4%	0.2%	33.8%	0.0%	6.3%	22.2%	2.3%	6.3%	0.0%	3.9%	0.0%	0.4%	4.9%	4.3%	0.0%	0.0%	0.9%	13.0%
1986	2153	2,3,4,5	0.0%	0.0%	0.0%	0.8%	0.2%	20.3%	0.0%	9.4%	18.6%	2.6%	13.0%	0.0%	2.7%	0.0%	0.2%	4.9%	7.6%	0.0%	0.0%	1.0%	18.7%
1987	2642	2,3,4,5	0.0%	0.0%	0.0%	0.8%	0.3%	18.7%	0.5%	16.0%	18.8%	0.4%	2.3%	0.0%	4.0%	0.0%	0.2%	3.9%	2.7%	0.0%	0.0%	1.2%	30.0%
1988	2376	2,3,4,5	0.4%	0.1%	0.0%	0.2%	0.0%	18.0%	0.0%	6.5%	12.9%	0.0%	2.3%	0.0%	4.2%	0.0%	0.1%	4.0%	2.9%	0.0%	0.0%	2.6%	45.9%
1989	1306	2,3,4,5	0.3%	0.0%	0.0%	0.0%	0.0%	23.3%	0.0%	1.8%	21.2%	0.0%	3.6%	0.0%	5.8%	0.0%	0.2%	3.7%	1.3%	0.0%	0.0%	0.6%	38.3%
1990	1803	2,3,4,5	0.9%	0.0%	0.0%	0.0%	0.3%	10.5%	2.0%	3.4%	17.1%	0.1%	4.8%	0.0%	6.1%	0.0%	0.5%	15.5%	7.5%	0.0%	0.0%	1.1%	30.1%
1991	3118	2,3,4,5	0.3%	0.1%	0.0%	0.4%	0.1%	19.2%	0.6%	8.5%	16.0%	0.2%	5.2%	0.0%	13.3%	0.0%	0.1%	5.8%	5.1%	0.0%	0.0%	1.5%	23.4%
1992	4154	2,3,4,5	0.3%	0.0%	0.0%	0.1%	0.1%	20.2%	0.1%	6.2%	10.9%	0.7%	1.6%	0.0%	8.7%	0.0%	0.1%	0.9%	3.6%	0.0%	0.0%	1.2%	45.3%
1993	1982	2,3,4,5	0.3%	0.0%	0.0%	0.0%	0.4%	13.4%	0.4%	7.7%	7.1%	0.0%	1.4%	0.0%	7.6%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	2.0%	58.7%
1994	740	2,3,4,5	0.4%	0.4%	0.0%	0.8%	0.0%	8.1%	2.6%	3.2%	7.7%	0.4%	7.3%	0.0%	1.5%	0.0%	0.0%	5.3%	5.9%	0.0%	0.0%	5.8%	50.5%
1995	2191	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.2%	11.6%	0.5%	0.0%	7.9%	0.0%	3.1%	0.0%	1.1%	0.0%	0.0%	1.5%	2.3%	0.0%	0.0%	1.0%	70.7%
1996	1788	2,3,4,5	0.2%	0.0%	0.0%	0.1%	0.0%	2.0%	0.3%	0.0%	23.1%	0.0%	2.2%	0.0%	4.0%	0.0%	0.0%	1.1%	4.3%	0.0%	0.0%	2.2%	60.6%
1997	2405	2,3,4,5	0.8%	0.0%	0.0%	0.2%	0.6%	12.1%	1.9%	0.0%	14.8%	0.5%	3.7%	0.0%	4.6%	0.0%	0.1%	2.5%	3.8%	0.0%	0.0%	2.5%	51.8%
1998	3178	2,3,4,5	0.5%	0.0%	0.0%	0.0%	0.3%	0.2%	0.3%	0.0%	4.0%	0.0%	0.2%	0.0%	3.1%	0.0%	0.0%	0.3%	0.8%	0.0%	0.0%	1.3%	88.9%
1999	3387	2,3,4,5	0.1%	0.0%	0.0%	0.2%	0.1%	0.3%	1.9%	0.0%	11.2%	0.0%	0.4%	0.0%	13.5%	0.0%	0.5%	0.7%	0.5%	0.0%	0.0%	1.6%	68.9%
2000	2719	2,3,4,5	0.1%	0.0%	0.0%	0.0%	0.6%	5.8%	2.8%	0.0%	5.1%	0.0%	0.0%	0.0%	4.4%	0.0%	0.1%	0.7%	0.8%	0.0%	0.0%	2.5%	76.9%
2001	4230	2,3,4,5	0.1%	0.1%	0.0%	0.0%	0.3%	3.6%	1.7%	0.0%	9.2%	0.0%	0.2%	0.0%	6.2%	0.0%	0.4%	1.1%	3.9%	0.0%	0.0%	13.0%	60.3%
2002	5173	2,3,4,5	0.3%	0.0%	0.0%	0.1%	0.3%	8.5%	5.0%	0.0%	4.2%	0.0%	0.7%	0.0%	8.0%	0.0%	1.1%	0.3%	1.8%	0.0%	0.0%	5.3%	64.2%
2003	4684	2,3,4,5	0.2%	0.0%	0.0%	0.0%	0.2%	5.8%	3.0%	0.0%	3.2%	0.0%	0.3%	0.0%	8.5%	0.0%	0.5%	0.3%	1.2%	0.0%	0.0%	6.4%	70.4%
2004	6770	2,3,4,5	0.2%	0.0%	0.0%	0.2%	0.0%	5.2%	2.4%	0.0%	0.8%	0.0%	0.7%	0.0%	6.8%	0.0%	0.2%	0.1%	1.0%	0.0%	0.0%	4.8%	77.5%
2005	4058	2,3,4,5	0.0%	0.0%	0.0%	0.1%	0.3%	7.5%	4.4%	0.0%	3.7%	0.0%	3.4%	0.0%	3.8%	0.0%	0.9%	0.9%	0.9%	0.0%	0.0%	6.0%	68.2%
2006	3009	2,3,4,5	0.0%	0.0%	0.0%	0.5%	0.0%	7.4%	2.2%	0.0%	2.4%	0.0%	0.6%	0.0%	2.8%	0.0%	0.3%	0.3%	1.6%	0.0%	0.0%	4.5%	77.5%
2007	1802	2,3,4,5	0.0%	0.0%	0.0%	0.3%	0.0%	8.5%	3.3%	0.0%	2.3%	0.0%	3.1%	0.0%	2.6%	0.0%	0.2%	0.7%	1.6%	0.0%	0.2%	5.9%	71.4%
2008	2847	2,3,4,5	0.3%	0.0%	0.0%	0.0%	0.0%	11.0%	5.0%	0.0%	2.1%	0.0%	0.8%	0.0%	4.8%	0.0%	1.7%	0.9%	1.9%	0.0%	0.0%	9.8%	61.6%
2009	2947	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	3.4%	0.0%	4.7%	0.0%	3.6%	0.0%	0.7%	0.0%	0.3%	1.3%	3.4%	0.0%	0.0%	12.6%	68.3%
2010	5329	2,3,4,5	0.3%	0.0%	0.0%	0.1%	0.0%	3.1%	3.2%	0.0%	7.4%	0.0%	1.9%	0.0%	4.2%	0.0%	1.1%	1.0%	1.9%	0.0%	0.0%	6.6%	69.1%
1979-2010	3040		0.3%	0.0%	0.0%	0.2%	0.2%	10.8%	1.8%	2.7%	10.0%	0.3%	2.8%	0.0%	5.3%	0.0%	0.4%	2.4%	2.8%	0.0%	0.0%	4.0%	56.2%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	2248		0.4%	0.1%	0.0%	0.3%	0.2%	17.9%	0.6%	6.3%	14.6%	0.6%	4.6%	0.0%	5.4%	0.0%	0.2%	4.6%	4.0%	0.0%	0.0%	1.7%	38.6%
1996-1998	2457		0.5%	0.0%	0.0%	0.1%	0.3%	4.8%	0.8%	0.0%	14.0%	0.2%	2.0%	0.0%	3.9%	0.0%	0.0%	1.3%	3.0%	0.0%	0.0%	2.0%	67.1%
1999-2010	3913		0.1%	0.0%	0.0%	0.1%	0.1%	5.7%	3.2%	0.0%	4.7%	0.0%	1.3%	0.0%	5.5%	0.0%	0.6%	0.7%	1.7%	0.0%	0.0%	6.6%	69.5%

Appendix C.9. Percent distribution of Chilkat River reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM														Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal				
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1998	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1999	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2000	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	36	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	200	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	359	3,4,5	6.4%	9.7%	7.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	76.0%
2005	353	3,4,5,6	6.5%	5.9%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	85.6%
2006	184	3,4,5,6	4.9%	2.2%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	90.8%
2007	157	3,4,5,6	7.0%	8.3%	5.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	79.6%
2008	270	3,4,5,6	7.4%	7.4%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	84.1%
2009	356	3,4,5,6	5.1%	1.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	93.0%
2010	214	3,4,5,6	5.6%	13.6%	5.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	75.2%
1979-2010	270		6.1%	7.0%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	83.5%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1996-1998	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1999-2010	270		6.1%	7.0%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	83.5%

Appendix C.10. Percent distribution of Chilkat River total fishing mortalities among fisheries and escapement.

	Estimated		AABM							ISBM														
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1998	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1999	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2000	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	48	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	222	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	379	3,4,5	7.1%	12.7%	8.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	72.0%
2005	365	3,4,5,6	7.1%	7.9%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	82.7%
2006	189	3,4,5,6	5.8%	3.2%	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	88.4%
2007	184	3,4,5,6	7.6%	18.5%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	67.9%
2008	279	3,4,5,6	7.9%	9.7%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	81.4%
2009	361	3,4,5,6	5.5%	2.5%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	91.7%
2010	234	3,4,5,6	6.4%	17.9%	6.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	68.8%
1979-2010	284		6.8%	10.3%	3.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	79.0%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1996-1998	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1999-2010	284		6.8%	10.3%	3.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	79.0%

Appendix C.11. Percent distribution of Cowichan River Fall (Lower Strait of Georgia Natural) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM														Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal				
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	73	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	261	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	343	2,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	1072	2,3,5	0.0%	0.0%	0.0%	0.0%	0.3%	1.3%	0.0%	18.8%	32.5%	1.4%	17.4%	0.0%	0.7%	0.0%	0.3%	3.1%	2.0%	0.0%	0.7%	1.9%	19.8%
1991	2862	2,3,4	0.1%	0.0%	0.0%	0.2%	1.5%	3.4%	0.9%	7.3%	52.3%	0.2%	5.6%	0.0%	0.9%	0.0%	0.0%	3.7%	0.9%	0.0%	0.5%	0.8%	21.6%
1992	3227	2,3,4,5	0.1%	0.0%	0.0%	0.4%	0.9%	9.6%	1.4%	17.2%	45.1%	1.1%	5.4%	0.0%	0.3%	0.0%	0.0%	1.4%	1.3%	0.0%	0.9%	0.5%	14.6%
1993	3287	2,3,4,5	0.2%	0.0%	0.0%	0.1%	1.2%	7.8%	1.6%	10.1%	48.9%	0.5%	4.0%	0.0%	0.6%	0.0%	0.0%	0.9%	0.5%	0.0%	1.3%	0.7%	21.8%
1994	1020	2,3,4,5	0.6%	0.0%	0.0%	0.4%	0.0%	4.0%	0.9%	4.6%	30.9%	0.2%	8.8%	0.0%	0.4%	0.0%	0.0%	3.7%	0.5%	0.0%	4.4%	2.1%	38.5%
1995	1356	2,3,4,5	0.1%	0.0%	0.0%	0.0%	0.0%	4.1%	0.7%	0.0%	29.9%	0.0%	2.1%	0.0%	0.0%	0.0%	0.0%	2.2%	0.7%	0.0%	1.8%	3.9%	54.4%
1996	1023	2,3,4,5	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	39.8%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.9%	3.5%	0.0%	5.8%	2.2%	45.7%
1997	784	2,3,4,5	0.8%	0.0%	0.0%	0.0%	0.5%	2.3%	0.9%	0.0%	18.9%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	3.1%	2.4%	0.0%	0.4%	2.0%	68.2%
1998	397	2,3,4,5	4.0%	0.0%	0.0%	0.0%	0.8%	0.5%	1.8%	0.0%	19.1%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	0.0%	9.6%	7.3%	53.9%
1999	415	2,3,4,5	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	3.9%	0.0%	32.5%	0.0%	0.0%	0.0%	1.0%	0.0%	0.7%	6.7%	0.0%	0.0%	2.9%	6.0%	45.1%
2000	689	2,3,4,5	0.4%	0.1%	0.0%	0.0%	0.0%	1.3%	4.8%	0.0%	12.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.2%	1.3%	0.0%	0.6%	6.2%	68.4%
2001	619	2,3,4,5	0.3%	0.0%	0.0%	0.0%	0.2%	10.7%	0.0%	0.0%	24.1%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	11.6%	1.0%	0.0%	8.1%	2.3%	41.7%
2002	635	2,3,4,5	1.3%	0.0%	0.0%	0.0%	2.2%	4.4%	3.0%	0.0%	18.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	3.8%	4.1%	0.0%	14.2%	13.7%	34.8%
2003	299	2,3,4,5	2.3%	0.3%	0.0%	2.7%	3.0%	9.7%	3.0%	0.0%	24.4%	3.7%	0.0%	0.0%	0.7%	0.0%	0.0%	6.7%	2.3%	0.0%	5.7%	4.0%	31.4%
2004	309	2,3,4,5	0.0%	0.3%	0.0%	1.0%	4.2%	15.2%	12.3%	0.0%	18.8%	0.0%	0.0%	0.0%	2.6%	0.0%	0.0%	6.5%	1.6%	0.0%	4.5%	3.2%	29.8%
2005	285	2,3,4,5	0.0%	0.4%	0.0%	1.4%	4.9%	24.2%	2.1%	0.0%	7.7%	0.0%	1.1%	0.0%	0.4%	0.0%	1.1%	15.4%	1.1%	0.0%	8.8%	0.0%	31.6%
2006	249	3,4,5	0.0%	0.0%	0.0%	0.8%	0.0%	23.7%	9.2%	0.0%	14.1%	0.0%	0.0%	0.0%	2.4%	0.0%	0.8%	5.2%	4.8%	0.0%	7.6%	0.0%	31.3%
2007	221	2,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	8.1%	1.4%	0.0%	4.5%	0.0%	0.9%	0.0%	0.0%	0.0%	0.5%	6.8%	0.0%	0.0%	6.8%	0.0%	71.0%
2008	212	2,3,5	0.0%	0.0%	0.0%	0.0%	0.0%	14.6%	13.2%	0.0%	22.2%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	5.2%	0.0%	0.0%	7.1%	0.0%	36.3%
2009	315	2,3,4	0.0%	0.0%	1.0%	0.0%	0.0%	6.7%	9.8%	0.0%	29.2%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	4.1%	3.2%	0.0%	10.2%	0.0%	35.2%
2010	816	2,3,4,5	0.2%	0.1%	0.0%	0.0%	1.7%	8.5%	2.3%	0.0%	19.9%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	5.5%	2.2%	0.0%	2.6%	0.0%	55.9%
1979-2010	957		0.5%	0.1%	0.0%	0.3%	1.1%	7.6%	3.5%	2.8%	26.0%	0.3%	2.2%	0.0%	0.7%	0.0%	0.2%	4.9%	1.6%	0.0%	5.0%	2.7%	40.5%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	2137		0.2%	0.0%	0.0%	0.2%	0.6%	5.0%	0.9%	9.7%	39.9%	0.6%	7.2%	0.0%	0.5%	0.0%	0.0%	2.5%	1.0%	0.0%	1.6%	1.6%	28.4%
1996-1998	735		1.7%	0.0%	0.0%	0.0%	0.4%	0.9%	1.2%	0.0%	25.9%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	2.2%	2.0%	0.0%	5.2%	3.9%	55.9%
1999-2010	422		0.4%	0.1%	0.1%	0.5%	1.5%	10.6%	5.4%	0.0%	19.0%	0.3%	0.2%	0.0%	0.9%	0.0%	0.3%	6.8%	1.8%	0.0%	6.6%	3.0%	42.7%

Appendix C.12. Percent distribution of Cowichan River Fall (Lower Strait of Georgia Natural) total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	120	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	302	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	626	2,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	2071	2,3,5	0.0%	0.0%	0.0%	0.1%	0.5%	2.2%	0.0%	13.0%	54.9%	1.0%	10.1%	0.0%	0.6%	0.0%	0.2%	3.5%	1.9%	0.0%	0.4%	1.3%	10.2%
1991	4197	2,3,4	0.1%	0.0%	0.0%	0.2%	1.2%	3.9%	0.7%	8.3%	60.2%	0.3%	4.2%	0.0%	0.7%	0.0%	0.0%	3.3%	0.9%	0.0%	0.4%	0.7%	14.7%
1992	4519	2,3,4,5	0.1%	0.1%	0.0%	0.4%	0.8%	8.8%	1.1%	16.8%	52.5%	1.0%	4.2%	0.0%	0.2%	0.0%	0.0%	1.3%	1.3%	0.0%	0.7%	0.5%	10.4%
1993	4094	2,3,4,5	0.3%	0.0%	0.0%	0.1%	1.1%	7.9%	1.4%	11.1%	53.1%	0.5%	3.4%	0.0%	0.6%	0.0%	0.0%	0.9%	0.5%	0.0%	1.1%	0.8%	17.5%
1994	1341	2,3,4,5	0.5%	0.0%	0.0%	0.4%	0.0%	4.0%	0.7%	4.8%	41.3%	0.1%	7.8%	0.0%	0.4%	0.0%	0.0%	4.1%	0.7%	0.0%	3.7%	2.3%	29.3%
1995	1665	2,3,4,5	0.2%	0.0%	0.0%	0.0%	0.0%	4.9%	0.6%	0.0%	37.5%	0.0%	3.2%	0.0%	0.0%	0.0%	0.0%	2.5%	0.9%	0.0%	1.5%	4.4%	44.3%
1996	1352	2,3,4,5	0.3%	0.0%	0.0%	0.0%	0.0%	0.4%	1.0%	0.0%	50.3%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	1.0%	4.4%	0.0%	4.7%	2.6%	34.5%
1997	933	2,3,4,5	1.0%	0.0%	0.0%	0.0%	0.6%	2.8%	0.9%	0.0%	26.0%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	3.4%	3.2%	0.0%	0.3%	2.9%	57.3%
1998	472	2,3,4,5	4.0%	0.0%	0.0%	0.0%	0.8%	0.4%	1.7%	0.0%	26.1%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	3.6%	0.0%	0.0%	8.7%	8.9%	45.3%
1999	578	2,3,4,5	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	3.5%	0.0%	46.2%	0.0%	0.0%	0.0%	0.9%	0.0%	0.5%	7.6%	0.0%	0.0%	2.2%	5.5%	32.4%
2000	799	2,3,4,5	0.8%	0.4%	0.0%	0.0%	0.0%	1.3%	4.9%	0.0%	18.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	1.9%	0.0%	0.5%	7.5%	58.9%
2001	776	2,3,4,5	0.4%	0.0%	0.0%	0.0%	0.3%	9.4%	0.0%	0.0%	32.6%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	12.9%	1.9%	0.0%	6.7%	2.4%	33.2%
2002	736	2,3,4,5	1.5%	0.0%	0.0%	0.0%	2.7%	3.9%	3.3%	0.0%	21.3%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	4.1%	5.2%	0.0%	12.5%	14.8%	30.0%
2003	390	2,3,4,5	2.3%	0.3%	0.0%	2.6%	3.6%	8.5%	3.3%	0.0%	31.3%	3.8%	0.0%	0.0%	0.5%	0.0%	0.0%	7.9%	3.1%	0.0%	4.6%	4.1%	24.1%
2004	376	2,3,4,5	0.0%	0.5%	0.0%	0.8%	5.9%	13.3%	12.5%	0.0%	23.4%	0.0%	0.0%	0.0%	2.7%	0.0%	0.0%	6.9%	1.9%	0.0%	4.0%	3.7%	24.5%
2005	345	2,3,4,5	0.0%	0.3%	0.0%	1.4%	6.4%	22.6%	2.3%	0.0%	10.1%	0.0%	1.4%	0.0%	0.3%	0.0%	0.9%	18.8%	1.4%	0.0%	7.8%	0.0%	26.1%
2006	269	3,4,5	0.0%	0.0%	0.0%	0.7%	0.0%	22.7%	9.7%	0.0%	16.4%	0.0%	0.0%	0.0%	2.6%	0.0%	0.7%	5.6%	5.6%	0.0%	7.1%	0.0%	29.0%
2007	291	2,4,5	0.0%	0.0%	0.7%	0.0%	0.0%	7.9%	2.4%	0.0%	18.6%	0.0%	1.4%	0.0%	0.3%	0.0%	0.7%	8.2%	0.0%	0.0%	5.8%	0.0%	54.0%
2008	268	2,3,5	0.0%	0.0%	0.4%	0.0%	0.4%	12.3%	12.7%	0.0%	32.8%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	4.9%	0.7%	0.0%	6.0%	0.0%	28.7%
2009	505	2,3,4	0.0%	0.0%	0.6%	0.0%	0.4%	5.3%	7.5%	0.0%	46.7%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	5.5%	4.8%	0.0%	6.5%	0.0%	22.0%
2010	1023	2,3,4,5	0.3%	0.1%	0.0%	0.0%	2.3%	7.6%	2.5%	0.0%	29.7%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	6.5%	3.1%	0.0%	2.2%	0.0%	44.6%
1979-2010	1286		0.6%	0.1%	0.1%	0.3%	1.3%	7.1%	3.5%	2.6%	34.8%	0.3%	1.8%	0.0%	0.6%	0.0%	0.1%	5.6%	2.1%	0.0%	4.2%	3.0%	32.0%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	2981		0.2%	0.0%	0.0%	0.2%	0.6%	5.3%	0.8%	9.0%	49.9%	0.5%	5.5%	0.0%	0.4%	0.0%	0.0%	2.6%	1.0%	0.0%	1.3%	1.7%	21.1%
1996-1998	919		1.8%	0.0%	0.0%	0.0%	0.5%	1.2%	1.2%	0.0%	34.1%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	2.7%	2.5%	0.0%	4.6%	4.8%	45.7%
1999-2010	530		0.4%	0.1%	0.1%	0.5%	1.9%	9.6%	5.4%	0.0%	27.3%	0.3%	0.2%	0.0%	0.9%	0.0%	0.2%	7.8%	2.5%	0.0%	5.5%	3.2%	34.0%

Appendix C.13. Percent distribution of Cowlitz Fall Tule (Fall Cowlitz Hatchery) reported catch among fisheries and escapement.

	Estimated		AABM							ISBM													
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	3	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	242	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	378	2,3,4	5.6%	0.0%	0.0%	2.4%	6.3%	16.1%	0.0%	0.0%	0.0%	0.0%	3.7%	0.0%	10.8%	0.0%	12.7%	0.0%	0.0%	0.0%	14.8%	0.0%	27.5%
1982	435	2,3,4,5	3.7%	0.0%	0.2%	1.4%	0.0%	14.9%	0.9%	0.0%	0.0%	0.5%	3.2%	0.0%	18.4%	0.0%	10.6%	2.1%	0.0%	0.0%	7.6%	1.8%	34.7%
1983	564	2,3,4,5	3.7%	0.0%	0.0%	6.7%	0.0%	17.9%	0.0%	0.0%	0.4%	3.7%	1.1%	0.0%	6.9%	0.0%	17.6%	0.4%	0.0%	0.0%	4.4%	1.1%	36.2%
1984	748	2,3,4,5	4.4%	0.0%	0.0%	7.2%	0.8%	24.3%	0.0%	0.0%	0.0%	2.1%	1.9%	0.0%	4.5%	0.0%	0.1%	0.1%	0.0%	0.0%	15.0%	3.5%	36.0%
1985	677	2,3,4,5	3.7%	0.3%	0.0%	4.0%	0.0%	11.4%	0.0%	0.0%	0.4%	0.0%	5.6%	0.0%	4.4%	0.0%	5.2%	0.4%	0.4%	0.0%	6.1%	8.1%	49.9%
1986	1392	2,3,4,5	0.4%	0.1%	0.0%	0.2%	0.0%	12.7%	0.0%	0.0%	0.4%	0.6%	1.9%	0.0%	12.9%	0.0%	5.3%	0.2%	0.4%	0.0%	30.7%	6.8%	27.4%
1987	1316	2,3,4,5	3.7%	0.3%	0.0%	3.9%	0.0%	9.7%	1.0%	0.0%	0.0%	1.2%	0.8%	0.0%	11.4%	0.0%	7.2%	0.2%	0.5%	0.0%	22.8%	8.4%	29.0%
1988	1447	2,3,4,5	1.7%	0.3%	0.0%	1.9%	0.0%	15.9%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	15.3%	0.0%	2.0%	0.0%	0.0%	0.0%	24.0%	10.4%	27.7%
1989	578	2,3,4,5	3.3%	0.0%	0.7%	4.5%	0.0%	6.6%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	17.8%	0.0%	3.1%	0.0%	0.3%	0.0%	7.1%	7.1%	48.1%
1990	274	2,3,4,5	4.4%	0.0%	0.0%	1.8%	0.0%	14.2%	0.0%	0.0%	0.0%	2.9%	3.3%	0.0%	9.5%	0.0%	7.7%	0.0%	3.3%	0.0%	0.0%	1.1%	51.8%
1991	130	2,3,4,5	9.2%	3.8%	0.0%	3.1%	0.0%	5.4%	3.8%	0.0%	0.0%	1.5%	0.0%	0.0%	10.0%	0.0%	3.8%	0.0%	0.0%	0.0%	10.8%	5.4%	43.1%
1992	185	2,3,4,5	2.2%	0.0%	0.0%	0.0%	1.1%	17.8%	0.0%	0.0%	0.0%	2.2%	0.0%	0.0%	7.0%	2.2%	4.9%	0.0%	0.0%	0.0%	3.2%	0.0%	59.5%
1993	325	2,3,4,5	3.4%	0.0%	0.0%	2.5%	0.0%	6.8%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	17.5%	0.0%	7.4%	0.0%	0.0%	0.0%	3.1%	15.1%	43.4%
1994	213	2,3,4,5	4.2%	0.0%	0.0%	1.9%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	88.7%
1995	169	2,3,4,5	0.6%	0.0%	0.0%	1.8%	0.0%	1.8%	2.4%	0.0%	0.0%	0.0%	1.2%	0.0%	4.7%	0.0%	0.0%	1.2%	0.0%	0.0%	1.2%	1.8%	83.4%
1996	269	2,3,4,5	4.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	0.0%	0.0%	0.0%	5.9%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	3.3%	83.3%
1997	164	2,3,4,5	4.9%	0.0%	9.8%	3.0%	0.0%	4.9%	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%	5.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	68.3%
1998	81	2,3,4,5	3.7%	0.0%	0.0%	7.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.9%	0.0%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	76.5%
1999	139	2,3,4,5	4.3%	0.0%	3.6%	0.0%	5.8%	4.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.6%	0.0%	2.9%	0.0%	0.0%	0.0%	0.0%	14.4%	56.1%
2000	98	2,3,4,5	3.1%	0.0%	0.0%	0.0%	0.0%	8.2%	12.2%	0.0%	0.0%	0.0%	0.0%	0.0%	13.3%	0.0%	2.0%	0.0%	0.0%	0.0%	5.1%	5.1%	51.0%
2001	456	2,3,4,5	0.9%	0.0%	0.0%	0.0%	0.0%	1.3%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	10.5%	0.0%	9.4%	0.0%	0.0%	0.0%	1.5%	2.4%	70.6%
2002	528	2,3,4,5	6.3%	0.0%	0.0%	0.9%	0.0%	7.8%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.8%	0.0%	21.4%	0.0%	0.0%	0.0%	3.4%	3.8%	27.7%
2003	519	2,3,4,5	5.0%	0.0%	0.0%	1.3%	0.0%	10.0%	1.9%	0.0%	1.3%	0.0%	0.0%	0.0%	17.1%	0.0%	6.6%	0.0%	0.0%	0.0%	8.9%	5.2%	42.6%
2004	207	2,3,4,5	4.3%	0.0%	0.0%	1.0%	0.0%	6.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.9%	0.0%	9.2%	0.0%	1.4%	0.0%	9.2%	2.4%	48.3%
2005	226	2,3,4,5	2.7%	5.8%	0.0%	2.7%	0.0%	4.4%	3.1%	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%	0.0%	5.3%	0.0%	0.0%	0.0%	3.5%	4.0%	60.6%
2006	138	2,3,4,5	5.8%	0.0%	0.0%	2.9%	0.0%	5.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.5%	0.0%	2.2%	0.0%	0.0%	0.0%	2.2%	10.9%	64.5%
2007	135	2,3,4,5	2.2%	1.5%	0.0%	5.2%	0.0%	10.4%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	13.3%	0.0%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	60.0%
2008	190	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	8.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	0.0%	5.3%	0.0%	1.6%	0.0%	2.6%	10.0%	70.0%
2009	429	2,3,4,5	2.1%	0.0%	1.2%	0.0%	1.4%	1.6%	0.0%	0.0%	2.3%	0.0%	0.0%	0.0%	5.6%	0.0%	3.7%	0.0%	1.4%	0.0%	1.4%	7.2%	72.0%
2010	606	2,3,4,5	2.5%	0.2%	0.0%	1.0%	0.3%	3.3%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	10.2%	0.0%	10.6%	0.0%	0.0%	0.0%	1.8%	1.3%	67.5%
1979-2010	434		3.5%	0.4%	0.5%	2.3%	0.5%	8.4%	1.2%	0.0%	0.3%	0.5%	0.9%	0.0%	10.5%	0.1%	5.7%	0.2%	0.3%	0.0%	6.4%	4.7%	53.5%
1979-1984	531		4.3%	0.0%	0.1%	4.4%	1.8%	18.3%	0.2%	0.0%	0.1%	1.6%	2.5%	0.0%	10.2%	0.0%	10.2%	0.6%	0.0%	0.0%	10.5%	1.6%	33.6%
1985-1995	610		3.3%	0.4%	0.1%	2.3%	0.1%	9.5%	0.7%	0.0%	0.1%	0.8%	1.4%	0.0%	10.4%	0.2%	4.2%	0.2%	0.5%	0.0%	9.9%	5.8%	50.2%
1996-1998	171		4.2%	0.0%	3.3%	3.5%	0.0%	1.6%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	7.1%	0.0%	0.8%	0.0%	0.0%	0.0%	0.4%	1.5%	76.0%
1999-2010	306		3.3%	0.6%	0.4%	1.2%	0.6%	5.9%	2.4%	0.0%	0.3%	0.0%	0.0%	0.0%	11.6%	0.0%	6.9%	0.0%	0.4%	0.0%	3.3%	5.6%	57.6%

Appendix C.14. Percent distribution of Cowlitz Fall Tule (Fall Cowlitz Hatchery) total fishing mortalities among fisheries and escapement.

	Estimated		AABM							ISBM													
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	28	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	282	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	417	2,3,4	6.0%	0.0%	0.0%	2.4%	6.2%	17.3%	0.0%	0.0%	0.0%	0.0%	3.4%	0.0%	12.7%	0.0%	12.7%	0.5%	0.0%	0.0%	13.9%	0.0%	24.9%
1982	505	2,3,4,5	4.2%	0.0%	0.4%	1.6%	0.0%	16.4%	1.0%	0.0%	0.0%	0.4%	3.4%	0.0%	20.2%	0.0%	10.9%	2.8%	0.0%	0.0%	7.3%	1.6%	29.9%
1983	616	2,3,4,5	4.4%	0.0%	0.0%	7.1%	0.0%	18.8%	0.0%	0.0%	0.3%	3.9%	1.0%	0.0%	7.8%	0.0%	17.7%	0.5%	0.0%	0.0%	4.4%	1.0%	33.1%
1984	794	2,3,4,5	5.2%	0.0%	0.0%	7.4%	0.9%	25.2%	0.0%	0.0%	0.0%	2.3%	1.9%	0.0%	4.8%	0.0%	0.1%	0.1%	0.0%	0.0%	14.9%	3.4%	33.9%
1985	741	2,3,4,5	3.9%	0.9%	0.0%	4.5%	0.0%	12.6%	0.0%	0.0%	0.4%	0.0%	5.7%	0.0%	5.1%	0.0%	5.7%	0.5%	0.7%	0.0%	6.7%	7.7%	45.6%
1986	1552	2,3,4,5	0.5%	0.2%	0.0%	0.2%	0.0%	13.9%	0.0%	0.0%	0.3%	0.7%	1.8%	0.0%	14.4%	0.0%	5.5%	0.3%	0.5%	0.0%	30.9%	6.3%	24.5%
1987	1477	2,3,4,5	5.7%	0.6%	0.0%	4.5%	0.0%	11.1%	0.9%	0.0%	0.0%	1.4%	0.7%	0.0%	12.2%	0.0%	7.1%	0.1%	0.5%	0.0%	21.5%	7.7%	25.8%
1988	1548	2,3,4,5	1.8%	0.6%	0.0%	2.1%	0.0%	17.6%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	16.0%	0.0%	2.0%	0.0%	0.0%	0.0%	23.2%	10.2%	25.9%
1989	611	2,3,4,5	4.3%	0.0%	0.7%	4.7%	0.0%	7.2%	0.0%	0.0%	0.0%	0.0%	1.3%	0.0%	18.8%	0.0%	3.3%	0.0%	0.3%	0.0%	6.9%	7.0%	45.5%
1990	295	2,3,4,5	4.4%	0.0%	0.0%	2.0%	0.0%	15.6%	0.0%	0.0%	0.0%	3.1%	3.7%	0.0%	10.2%	0.0%	7.8%	0.0%	4.1%	0.0%	0.0%	1.0%	48.1%
1991	151	2,3,4,5	11.3%	8.6%	0.0%	3.3%	0.0%	6.0%	3.3%	0.0%	0.0%	1.3%	0.0%	0.0%	10.6%	0.0%	3.3%	0.0%	0.0%	0.0%	9.9%	5.3%	37.1%
1992	203	2,3,4,5	2.5%	0.0%	0.0%	0.0%	1.5%	20.2%	0.0%	0.0%	0.0%	2.5%	0.0%	0.0%	7.9%	2.5%	5.4%	0.0%	0.0%	0.0%	3.4%	0.0%	54.2%
1993	361	2,3,4,5	4.2%	0.0%	0.0%	2.8%	0.0%	7.8%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	19.1%	0.0%	7.5%	0.0%	0.0%	0.0%	3.3%	15.2%	39.1%
1994	217	2,3,4,5	5.1%	0.0%	0.0%	2.3%	0.0%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	87.1%
1995	173	2,3,4,5	1.7%	0.0%	0.0%	2.3%	0.0%	2.3%	2.3%	0.0%	0.0%	0.0%	1.2%	0.0%	4.6%	0.0%	0.0%	1.2%	0.0%	0.0%	1.2%	1.7%	81.5%
1996	279	2,3,4,5	5.4%	0.0%	0.0%	0.4%	0.0%	0.7%	0.0%	0.0%	2.5%	0.0%	0.0%	0.0%	6.1%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	3.6%	80.3%
1997	172	2,3,4,5	5.8%	0.0%	11.0%	3.5%	0.0%	5.2%	0.0%	0.0%	2.9%	0.0%	0.0%	0.0%	5.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	65.1%
1998	83	2,3,4,5	4.8%	0.0%	0.0%	8.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.6%	0.0%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	74.7%
1999	150	2,3,4,5	6.7%	0.0%	4.0%	0.0%	6.7%	4.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.3%	0.0%	3.3%	0.0%	0.0%	0.0%	0.0%	14.0%	52.0%
2000	110	2,3,4,5	3.6%	0.0%	0.0%	0.0%	0.0%	8.2%	13.6%	0.0%	0.0%	0.0%	0.0%	0.0%	16.4%	0.0%	1.8%	0.0%	0.0%	0.0%	5.5%	5.5%	45.5%
2001	479	2,3,4,5	1.0%	0.0%	0.0%	0.0%	0.0%	1.3%	4.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.1%	0.0%	10.2%	0.0%	0.0%	0.0%	1.7%	2.5%	67.2%
2002	577	2,3,4,5	6.9%	0.0%	0.0%	1.0%	0.0%	7.3%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	27.6%	0.0%	21.5%	0.0%	0.0%	0.0%	3.3%	3.8%	25.3%
2003	546	2,3,4,5	5.3%	0.0%	0.0%	1.5%	0.0%	9.9%	2.4%	0.0%	1.5%	0.0%	0.0%	0.0%	18.3%	0.0%	7.0%	0.0%	0.0%	0.0%	8.6%	5.1%	40.5%
2004	220	2,3,4,5	5.5%	0.0%	0.0%	0.9%	0.0%	5.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	19.5%	0.0%	9.5%	0.0%	1.8%	0.0%	9.1%	2.3%	45.5%
2005	236	2,3,4,5	3.0%	6.8%	0.0%	3.0%	0.0%	4.2%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%	8.5%	0.0%	5.5%	0.0%	0.0%	0.0%	3.4%	4.2%	58.1%
2006	141	2,3,4,5	5.7%	0.0%	0.0%	2.8%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.1%	0.0%	2.1%	0.0%	0.0%	0.0%	2.1%	12.1%	63.1%
2007	154	2,3,4,5	2.6%	3.9%	0.0%	5.2%	0.0%	9.7%	3.9%	0.0%	0.0%	0.0%	0.0%	0.0%	17.5%	0.0%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%	52.6%
2008	199	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	9.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	0.0%	6.0%	0.0%	2.0%	0.0%	3.0%	10.6%	66.8%
2009	464	2,3,4,5	2.8%	0.0%	1.7%	0.0%	1.7%	1.5%	0.0%	0.0%	3.7%	0.0%	0.0%	0.0%	6.5%	0.0%	3.9%	0.0%	2.4%	0.0%	1.5%	7.8%	66.6%
2010	643	2,3,4,5	3.4%	0.3%	0.0%	1.2%	0.3%	3.3%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	11.8%	0.0%	11.2%	0.0%	0.0%	0.0%	1.9%	1.4%	63.6%
1979-2010	470		4.2%	0.7%	0.6%	2.5%	0.6%	9.0%	1.3%	0.0%	0.4%	0.5%	0.9%	0.0%	11.5%	0.1%	5.9%	0.2%	0.4%	0.0%	6.3%	4.7%	50.1%
1979-1984	583		4.9%	0.0%	0.1%	4.6%	1.8%	19.4%	0.2%	0.0%	0.1%	1.6%	2.4%	0.0%	11.4%	0.0%	10.4%	1.0%	0.0%	0.0%	10.1%	1.5%	30.5%
1985-1995	666		4.1%	1.0%	0.1%	2.6%	0.1%	10.6%	0.6%	0.0%	0.1%	0.8%	1.5%	0.0%	11.1%	0.2%	4.3%	0.2%	0.6%	0.0%	9.7%	5.7%	46.8%
1996-1998	178		5.3%	0.0%	3.7%	4.1%	0.0%	2.0%	0.0%	0.0%	1.8%	0.0%	0.0%	0.0%	7.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.4%	1.6%	73.4%
1999-2010	327		3.9%	0.9%	0.5%	1.3%	0.7%	5.8%	2.7%	0.0%	0.4%	0.0%	0.0%	0.0%	13.1%	0.0%	7.2%	0.0%	0.5%	0.0%	3.3%	5.8%	53.9%

Appendix C.15. Percent distribution of Dome Creek Spring (Fraser Early) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM														Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal				
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	33	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	141	3,4,5	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	0.0%	0.0%	5.7%	0.0%	4.3%	0.0%	1.4%	0.0%	0.0%	0.0%	12.8%	0.0%	0.0%	3.5%	69.5%
1992	154	3,4,5,6	0.0%	0.0%	0.0%	0.0%	1.9%	3.9%	0.0%	2.6%	5.8%	0.0%	46.8%	0.0%	1.3%	0.0%	0.0%	0.0%	5.2%	0.0%	0.0%	0.0%	32.5%
1993	344	3,4,5,6	0.0%	0.0%	0.0%	0.0%	2.3%	1.2%	0.0%	0.0%	4.4%	0.0%	50.6%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.5%	34.6%
1994	295	3,4,5,6	0.7%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	1.4%	0.0%	26.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	67.8%
1995	514	3,4,5,6	0.0%	0.0%	0.0%	0.6%	0.0%	1.2%	0.0%	0.0%	5.3%	0.0%	21.0%	0.0%	0.4%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	2.9%	67.7%
1996	349	3,4,5,6	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	5.2%	0.0%	37.8%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	4.3%	50.4%
1997	317	3,4,5,6	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.3%	0.0%	6.3%	0.0%	38.5%	0.0%	1.3%	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	51.4%
1998	228	3,4,5,6	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.5%	0.0%	40.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	44.7%
1999	24	3,4,5,6	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	29.2%	0.0%	20.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.0%	25.0%
2000	94	3,4,5,6	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.0%	0.0%	39.4%	0.0%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	41.5%
2001	300	3,4,5,6	0.0%	0.0%	0.0%	0.0%	0.7%	2.0%	0.0%	0.0%	13.0%	0.0%	59.7%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.7%	21.7%
2002	148	4,5,6	0.0%	0.0%	0.0%	10.8%	0.0%	12.2%	0.0%	0.0%	10.1%	0.0%	18.2%	0.0%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	45.3%
2003	149	3,5,6	0.0%	0.0%	0.0%	5.4%	0.0%	0.0%	6.0%	0.0%	12.1%	0.0%	61.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.4%
2004	5	3,4,6	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	218	3,4,5	0.0%	0.0%	0.0%	3.7%	0.0%	0.0%	0.0%	0.0%	3.7%	0.0%	60.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.9%	25.7%
2006	89	4,5,6	0.0%	0.0%	0.0%	0.0%	0.0%	7.9%	0.0%	0.0%	6.7%	0.0%	31.5%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	52.8%
2007	16	5,6	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1979-2010	224		0.0%	0.0%	0.0%	1.4%	0.6%	2.0%	0.4%	0.2%	8.8%	0.0%	37.1%	0.0%	0.9%	0.0%	0.0%	0.1%	1.4%	0.0%	0.0%	4.0%	43.1%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	290		0.1%	0.0%	0.0%	0.1%	1.4%	1.5%	0.0%	0.5%	4.5%	0.0%	29.8%	0.0%	0.9%	0.0%	0.0%	0.0%	3.8%	0.0%	0.0%	2.9%	54.4%
1996-1998	298		0.0%	0.0%	0.0%	0.0%	0.3%	0.3%	0.1%	0.0%	6.3%	0.0%	39.0%	0.0%	0.4%	0.0%	0.0%	0.4%	0.5%	0.0%	0.0%	3.8%	48.9%
1999-2010	146		0.0%	0.0%	0.0%	2.8%	0.1%	3.1%	0.9%	0.0%	13.0%	0.0%	41.5%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.9%	32.5%

Appendix C.16. Percent distribution of Dome Creek Spring (Fraser Early) total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	1	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	41	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	152	3,4,5	0.0%	0.0%	0.0%	0.0%	3.3%	0.7%	0.0%	0.0%	7.2%	0.0%	5.3%	0.0%	2.0%	0.0%	0.0%	0.0%	13.8%	0.0%	0.0%	3.3%	64.5%
1992	163	3,4,5,6	0.0%	0.0%	0.0%	0.0%	2.5%	4.3%	0.0%	3.1%	7.4%	0.0%	44.8%	0.0%	1.2%	0.0%	0.0%	0.0%	6.1%	0.0%	0.0%	0.0%	30.7%
1993	361	3,4,5,6	0.0%	0.0%	0.0%	0.0%	2.8%	1.7%	0.0%	0.0%	6.6%	0.0%	48.8%	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.5%	33.0%
1994	304	3,4,5,6	1.0%	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	0.0%	1.6%	0.0%	27.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	65.8%
1995	533	3,4,5,6	0.0%	0.0%	0.0%	0.8%	0.0%	1.5%	0.0%	0.0%	6.9%	0.0%	20.8%	0.0%	0.4%	0.0%	0.0%	0.0%	1.3%	0.0%	0.0%	3.0%	65.3%
1996	374	3,4,5,6	0.0%	0.0%	0.0%	0.5%	0.8%	0.3%	0.0%	0.0%	8.0%	0.0%	36.9%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	0.0%	0.0%	4.3%	47.1%
1997	328	3,4,5,6	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.3%	0.0%	7.6%	0.0%	38.7%	0.0%	1.2%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	49.7%
1998	247	3,4,5,6	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.7%	0.0%	44.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.9%	41.3%
1999	39	3,4,5,6	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	53.8%	0.0%	12.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.9%	15.4%
2000	113	3,4,5,6	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	24.8%	0.0%	38.1%	0.0%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	34.5%
2001	326	3,4,5,6	0.0%	0.0%	0.0%	0.0%	0.9%	1.8%	0.0%	0.0%	17.5%	0.0%	56.7%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%	19.9%
2002	155	4,5,6	0.0%	0.0%	0.0%	11.0%	0.0%	11.6%	0.0%	0.0%	11.6%	0.0%	19.4%	0.0%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	43.2%
2003	153	3,5,6	0.0%	0.0%	0.0%	5.2%	0.0%	0.0%	7.8%	0.0%	12.4%	0.0%	59.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.0%
2004	10	3,4,6	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	228	3,4,5	0.0%	0.0%	0.0%	3.9%	0.0%	0.4%	0.0%	0.0%	4.4%	0.0%	58.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	7.0%	24.6%
2006	91	4,5,6	0.0%	0.0%	0.0%	0.0%	0.0%	8.8%	0.0%	0.0%	6.6%	0.0%	31.9%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	51.6%
2007	17	5,6	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1979-2010	238		0.1%	0.0%	0.0%	1.4%	0.7%	2.3%	0.5%	0.2%	12.3%	0.0%	36.2%	0.0%	0.9%	0.0%	0.0%	0.1%	1.6%	0.0%	0.0%	3.6%	40.1%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	303		0.2%	0.0%	0.0%	0.2%	1.7%	2.0%	0.0%	0.6%	6.0%	0.0%	29.3%	0.0%	1.0%	0.0%	0.0%	0.0%	4.3%	0.0%	0.0%	2.9%	51.8%
1996-1998	316		0.0%	0.0%	0.0%	0.2%	0.3%	0.5%	0.1%	0.0%	7.8%	0.0%	39.9%	0.0%	0.4%	0.0%	0.0%	0.4%	0.7%	0.0%	0.0%	3.7%	46.0%
1999-2010	158		0.0%	0.0%	0.0%	2.9%	0.1%	3.2%	1.1%	0.0%	18.7%	0.0%	39.6%	0.0%	1.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	4.0%	29.2%

Appendix C.17. Percent distribution of Elk River (Oregon Coast) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	11	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	245	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	986	2,3,4	1.2%	0.0%	0.1%	1.7%	0.0%	1.5%	0.0%	0.0%	0.0%	0.3%	1.4%	0.0%	5.3%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	78.1%	10.0%
1982	2967	2,3,4,5	0.6%	0.4%	0.2%	1.5%	0.0%	4.3%	0.0%	0.0%	0.0%	0.3%	0.6%	0.0%	14.9%	0.0%	0.8%	0.3%	0.0%	0.0%	0.0%	56.5%	19.6%
1983	3577	2,3,4,5	2.1%	0.1%	0.0%	4.8%	0.0%	5.7%	0.1%	0.0%	0.0%	1.1%	0.0%	0.0%	8.8%	0.0%	0.3%	0.0%	0.2%	0.0%	0.0%	22.2%	54.6%
1984	2287	2,3,4,5	2.3%	0.0%	0.0%	4.1%	0.1%	5.3%	0.0%	0.0%	0.0%	0.5%	0.2%	0.0%	8.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	59.5%
1985	1926	2,3,4,5	1.6%	0.0%	0.0%	1.9%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	4.9%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	31.8%	57.3%
1986	927	2,3,4,5	1.2%	0.0%	0.0%	2.7%	0.0%	11.2%	0.4%	0.0%	0.4%	1.9%	0.0%	0.0%	30.9%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	14.8%	35.6%
1987	1962	2,3,4,5	0.7%	0.0%	0.0%	3.2%	0.0%	4.9%	0.7%	0.0%	0.0%	0.7%	0.0%	0.0%	22.3%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	24.8%	41.7%
1988	2060	2,3,4,5	0.4%	0.0%	0.0%	2.4%	0.0%	3.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	17.3%	0.0%	0.5%	0.0%	0.2%	0.0%	0.0%	35.2%	40.5%
1989	1314	2,3,4,5	0.5%	0.0%	0.3%	1.2%	0.4%	1.7%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	26.9%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	31.7%	36.7%
1990	534	2,3,4,5	0.9%	0.0%	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	15.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	37.8%	42.5%
1991	452	2,3,4,5	0.0%	0.4%	0.0%	2.0%	0.0%	5.1%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	5.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	27.2%	59.1%
1992	573	2,3,4,5	1.4%	1.2%	0.0%	0.0%	0.0%	4.7%	0.7%	0.0%	0.0%	0.0%	0.3%	0.0%	8.9%	0.0%	0.3%	0.5%	0.0%	0.0%	0.0%	37.7%	44.2%
1993	849	2,3,4,5	1.1%	0.0%	0.0%	1.4%	0.4%	3.7%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	18.5%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	24.5%	49.2%
1994	1548	2,3,4,5	1.7%	0.2%	0.0%	1.4%	0.4%	2.4%	0.0%	0.0%	0.0%	0.1%	0.6%	0.0%	17.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	34.8%	41.1%
1995	3191	2,3,4,5	1.2%	0.2%	0.4%	0.8%	0.2%	1.4%	0.3%	0.0%	0.0%	0.0%	0.6%	0.0%	13.5%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	32.4%	49.0%
1996	4794	2,3,4,5	1.2%	0.0%	0.0%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	28.8%	0.0%	0.1%	0.0%	0.2%	0.0%	0.0%	11.9%	57.3%
1997	3893	2,3,4,5	12.8%	0.0%	0.1%	1.6%	0.3%	1.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	19.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	18.6%	46.2%
1998	5909	2,3,4,5	7.0%	0.0%	0.0%	3.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.7%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	9.5%	67.4%
1999	5811	2,3,4,5	5.0%	0.0%	0.3%	1.5%	0.2%	0.0%	0.2%	0.0%	0.0%	0.0%	0.1%	0.0%	15.4%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	16.4%	60.9%
2000	4780	2,3,4,5	5.7%	0.0%	0.1%	1.4%	0.5%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	22.9%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	14.1%	53.7%
2001	16482	2,3,4,5	2.3%	0.0%	0.2%	1.2%	0.0%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	10.4%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	12.6%	71.8%
2002	10692	2,3,4,5	4.8%	0.0%	0.5%	3.6%	0.6%	0.9%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	11.3%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	6.5%	70.6%
2003	6102	2,3,4,5	5.3%	0.0%	0.3%	3.2%	0.4%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.7%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	18.6%	53.3%
2004	10816	2,3,4,5	3.7%	0.0%	0.2%	1.8%	0.3%	1.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	12.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	6.1%	73.9%
2005	2848	2,3,4,5	8.4%	0.0%	0.2%	4.7%	1.6%	4.2%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	12.3%	51.1%
2006	2665	2,3,4,5	5.5%	0.0%	0.0%	4.4%	1.4%	4.9%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	20.5%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	11.5%	49.6%
2007	2067	2,3,4,5	7.8%	0.0%	0.6%	4.2%	0.9%	1.7%	0.5%	0.0%	0.3%	0.0%	0.0%	0.0%	27.0%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	18.7%	36.7%
2008	3987	2,3,4,5	3.9%	0.0%	0.0%	3.6%	1.6%	1.5%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	4.8%	0.0%	0.2%	0.0%	0.0%	0.0%	0.1%	19.5%	64.4%
2009	3199	2,3,4,5	5.8%	0.0%	0.1%	4.2%	0.7%	1.7%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	0.0%	0.3%	0.0%	0.1%	0.0%	0.0%	15.6%	68.6%
2010	3777	2,3,4,5	4.9%	0.0%	0.4%	4.4%	0.2%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	9.9%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	4.0%	74.8%
1979-2010	3766		3.4%	0.1%	0.1%	2.4%	0.3%	2.6%	0.3%	0.0%	0.0%	0.2%	0.2%	0.0%	15.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	23.5%	51.4%
1979-1984	2454		1.6%	0.1%	0.1%	3.0%	0.0%	4.2%	0.0%	0.0%	0.0%	0.5%	0.6%	0.0%	9.3%	0.0%	0.4%	0.1%	0.1%	0.0%	0.0%	44.2%	35.9%
1985-1995	1394		1.0%	0.2%	0.1%	1.5%	0.1%	3.8%	0.3%	0.0%	0.0%	0.3%	0.3%	0.0%	16.5%	0.0%	0.4%	0.1%	0.0%	0.0%	0.0%	30.2%	45.2%
1996-1998	4865		7.0%	0.0%	0.0%	1.6%	0.2%	0.4%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	20.2%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	13.3%	57.0%
1999-2010	6102		5.2%	0.0%	0.2%	3.2%	0.7%	1.6%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	14.1%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	13.0%	60.8%

Appendix C.18. Percent distribution of Elk River (Oregon Coast) total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	30	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	270	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	1191	2,3,4	2.4%	0.1%	0.2%	3.1%	0.0%	4.0%	0.0%	0.0%	0.0%	0.6%	1.3%	0.0%	12.3%	0.0%	0.4%	0.3%	0.0%	0.0%	0.0%	67.0%	8.3%
1982	3185	2,3,4,5	1.0%	0.4%	0.2%	1.7%	0.0%	4.7%	0.0%	0.0%	0.0%	0.3%	0.6%	0.0%	17.0%	0.0%	0.8%	0.4%	0.0%	0.0%	0.0%	54.6%	18.3%
1983	3732	2,3,4,5	2.7%	0.1%	0.0%	5.1%	0.0%	6.1%	0.1%	0.0%	0.0%	1.2%	0.0%	0.0%	9.8%	0.0%	0.3%	0.0%	0.3%	0.0%	0.0%	22.0%	52.3%
1984	2359	2,3,4,5	3.1%	0.0%	0.0%	4.2%	0.1%	5.5%	0.0%	0.0%	0.0%	0.6%	0.2%	0.0%	8.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.1%	57.7%
1985	1989	2,3,4,5	1.8%	0.0%	0.0%	2.2%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	5.6%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	32.1%	55.5%
1986	1068	2,3,4,5	1.9%	0.0%	0.0%	2.8%	0.0%	12.2%	0.5%	0.0%	0.5%	2.2%	0.0%	0.0%	34.9%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	13.4%	30.9%
1987	2134	2,3,4,5	0.8%	0.0%	0.0%	3.7%	0.0%	5.9%	0.7%	0.0%	0.0%	0.7%	0.0%	0.0%	24.9%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	23.7%	38.4%
1988	2226	2,3,4,5	0.5%	0.0%	0.0%	2.8%	0.0%	3.7%	0.0%	0.0%	0.0%	0.2%	0.1%	0.0%	18.8%	0.0%	0.5%	0.0%	0.2%	0.0%	0.0%	35.6%	37.5%
1989	1390	2,3,4,5	0.7%	0.0%	0.3%	1.3%	0.4%	1.9%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	28.6%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	31.4%	34.7%
1990	561	2,3,4,5	1.1%	0.0%	0.0%	0.0%	0.0%	2.7%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	17.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	37.8%	40.5%
1991	482	2,3,4,5	0.0%	1.0%	0.0%	2.5%	0.0%	6.2%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	5.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	27.8%	55.4%
1992	726	2,3,4,5	3.2%	4.4%	0.0%	0.0%	0.0%	8.0%	0.8%	0.0%	0.0%	0.0%	0.3%	0.0%	13.2%	0.0%	0.4%	1.2%	0.0%	0.0%	0.0%	33.6%	34.8%
1993	1033	2,3,4,5	2.9%	0.0%	0.0%	2.4%	0.3%	6.1%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	24.7%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	22.0%	40.5%
1994	1702	2,3,4,5	3.7%	0.8%	0.0%	1.9%	0.5%	2.8%	0.0%	0.0%	0.0%	0.2%	0.6%	0.0%	17.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	34.8%	37.4%
1995	3461	2,3,4,5	2.4%	0.7%	0.6%	1.0%	0.3%	2.0%	0.3%	0.0%	0.0%	0.0%	0.9%	0.0%	13.7%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	32.9%	45.2%
1996	5115	2,3,4,5	2.2%	0.0%	0.0%	1.8%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	29.0%	0.0%	0.2%	0.0%	0.2%	0.0%	0.0%	12.0%	53.7%
1997	4262	2,3,4,5	16.5%	0.0%	0.1%	1.9%	0.5%	1.2%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	19.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	18.3%	42.2%
1998	6133	2,3,4,5	8.5%	0.0%	0.0%	3.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.8%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	9.7%	64.9%
1999	6374	2,3,4,5	7.8%	0.0%	0.4%	1.8%	0.4%	0.0%	0.2%	0.0%	0.0%	0.0%	0.1%	0.0%	17.8%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	16.0%	55.5%
2000	5393	2,3,4,5	8.0%	0.1%	0.1%	1.7%	0.7%	0.7%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	26.3%	0.0%	0.7%	0.1%	0.0%	0.0%	0.0%	13.9%	47.6%
2001	17223	2,3,4,5	3.2%	0.0%	0.2%	1.5%	0.0%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	11.9%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	12.8%	68.8%
2002	11309	2,3,4,5	6.0%	0.0%	0.6%	4.2%	0.8%	0.9%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	12.8%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	6.5%	66.7%
2003	6492	2,3,4,5	6.3%	0.0%	0.3%	3.6%	0.5%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	19.5%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	18.5%	50.1%
2004	11181	2,3,4,5	4.3%	0.0%	0.2%	2.0%	0.4%	1.8%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	13.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	6.3%	71.5%
2005	3084	2,3,4,5	10.0%	0.0%	0.2%	5.3%	2.1%	4.1%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	17.4%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	12.0%	47.1%
2006	2987	2,3,4,5	6.7%	0.0%	0.0%	5.0%	2.1%	5.2%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	23.2%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	11.1%	44.3%
2007	2374	2,3,4,5	10.1%	0.1%	0.7%	4.9%	1.1%	1.6%	0.5%	0.0%	0.3%	0.0%	0.0%	0.0%	29.4%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	17.9%	32.0%
2008	4169	2,3,4,5	4.9%	0.0%	0.0%	3.9%	2.1%	1.6%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	5.2%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	19.9%	61.5%
2009	3332	2,3,4,5	6.9%	0.0%	0.2%	4.6%	0.8%	1.7%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	0.0%	0.3%	0.0%	0.1%	0.0%	0.0%	16.2%	65.8%
2010	3909	2,3,4,5	6.1%	0.0%	0.5%	4.7%	0.2%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	10.6%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	4.1%	72.3%
1979-2010	4019		4.5%	0.3%	0.2%	2.8%	0.5%	3.1%	0.3%	0.0%	0.0%	0.2%	0.2%	0.0%	16.8%	0.0%	0.5%	0.1%	0.0%	0.0%	0.0%	22.8%	47.7%
1979-1984	2617		2.3%	0.1%	0.1%	3.5%	0.0%	5.1%	0.0%	0.0%	0.0%	0.6%	0.5%	0.0%	11.9%	0.0%	0.4%	0.2%	0.1%	0.0%	0.0%	40.9%	34.1%
1985-1995	1525		1.7%	0.6%	0.1%	1.9%	0.1%	4.8%	0.3%	0.0%	0.0%	0.4%	0.3%	0.0%	18.6%	0.0%	0.5%	0.1%	0.0%	0.0%	0.0%	29.6%	41.0%
1996-1998	5170		9.1%	0.0%	0.0%	2.5%	0.3%	0.6%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	20.3%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	13.3%	53.6%
1999-2010	6486		6.7%	0.0%	0.3%	3.6%	0.9%	1.6%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	15.8%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	12.9%	56.9%

Appendix C.19. Percent distribution of Elwha River reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	23	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	185	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	641	2,3,4	24.3%	1.6%	0.0%	2.3%	0.5%	18.1%	0.9%	0.8%	6.4%	0.8%	6.2%	0.0%	0.9%	0.0%	0.0%	12.2%	13.4%	0.0%	0.2%	0.0%	11.4%
1987	401	2,3,4,5	14.7%	0.0%	0.0%	4.5%	2.0%	14.2%	2.5%	0.7%	9.0%	2.2%	5.7%	0.0%	3.0%	0.2%	0.0%	6.5%	18.7%	0.0%	0.0%	0.0%	16.0%
1988	430	2,3,4,5	5.3%	0.5%	0.5%	3.7%	2.3%	13.7%	6.0%	0.5%	0.0%	1.4%	1.2%	0.0%	4.4%	0.0%	0.0%	8.1%	8.4%	0.0%	4.0%	0.0%	40.0%
1989	279	3,4,5	6.1%	1.8%	0.0%	4.7%	2.2%	5.7%	0.0%	0.0%	0.0%	3.2%	0.0%	0.0%	2.9%	0.0%	0.4%	9.3%	13.3%	0.0%	2.2%	0.0%	48.4%
1990	38	2,4,5	0.0%	0.0%	0.0%	13.2%	0.0%	15.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	10.5%	0.0%	5.3%	0.0%	50.0%
1991	12	2,3,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.3%	0.0%	8.3%	0.0%	0.0%	83.3%	0.0%	0.0%	0.0%	0.0%	0.0%
1992	49	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	38.8%	4.1%	0.0%	0.0%	0.0%	10.2%	0.0%	16.3%	0.0%	0.0%	0.0%	26.5%	0.0%	0.0%	0.0%	4.1%
1993	129	2,3,4,5	9.3%	0.0%	0.0%	0.0%	0.0%	14.0%	11.6%	1.6%	10.9%	0.0%	0.0%	0.0%	3.1%	0.0%	0.0%	0.0%	28.7%	0.0%	3.1%	0.0%	17.8%
1994	76	2,3,4,5	3.9%	0.0%	0.0%	9.2%	0.0%	17.1%	0.0%	3.9%	2.6%	0.0%	7.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	55.3%
1995	117	2,3,4,5	0.0%	0.0%	0.0%	0.0%	2.6%	26.5%	2.6%	0.0%	0.0%	2.6%	6.0%	0.0%	1.7%	0.0%	0.0%	0.9%	10.3%	0.0%	0.0%	0.0%	47.0%
1996	289	2,3,4,5	3.5%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	0.0%	3.1%	0.0%	2.1%	0.0%	0.7%	0.0%	0.0%	0.0%	6.2%	0.0%	0.0%	0.0%	81.3%
1997	182	3,4,5	13.7%	0.0%	0.0%	1.6%	0.0%	4.9%	0.0%	0.0%	6.6%	0.0%	3.3%	0.0%	1.1%	0.0%	0.0%	0.0%	11.5%	0.0%	0.0%	0.0%	57.1%
1998	169	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1999	27	5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2000	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1979-2010	220		6.7%	0.3%	0.0%	3.3%	0.8%	14.1%	2.6%	0.6%	3.2%	0.9%	4.2%	0.0%	3.5%	0.0%	0.0%	10.5%	12.3%	0.0%	1.2%	0.0%	35.7%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	217		6.4%	0.4%	0.0%	3.8%	1.0%	16.4%	2.8%	0.7%	2.9%	1.0%	4.6%	0.0%	4.1%	0.0%	0.0%	12.6%	13.0%	0.0%	1.5%	0.0%	29.0%
1996-1998	236		8.6%	0.0%	0.0%	0.8%	0.0%	2.5%	1.6%	0.0%	4.9%	0.0%	2.7%	0.0%	0.9%	0.0%	0.0%	0.0%	8.9%	0.0%	0.0%	0.0%	69.2%
1999-2010	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Appendix C.20. Percent distribution of Elwha River total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			Esc.
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	71	2	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	272	2,3	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	727	2,3,4	24.2%	3.0%	0.0%	2.6%	0.7%	17.6%	1.1%	0.8%	6.1%	1.0%	5.9%	0.0%	1.1%	0.0%	0.0%	11.0%	14.7%	0.0%	0.1%	0.0%	10.0%
1987	472	2,3,4,5	16.3%	0.0%	0.0%	4.9%	1.9%	15.5%	2.3%	0.8%	8.3%	2.5%	5.1%	0.0%	3.0%	0.2%	0.0%	5.7%	19.9%	0.0%	0.0%	0.0%	13.6%
1988	463	2,3,4,5	5.8%	0.9%	0.6%	3.9%	2.4%	15.1%	6.0%	0.4%	0.0%	1.5%	1.3%	0.0%	4.5%	0.0%	0.0%	7.8%	8.9%	0.0%	3.7%	0.0%	37.1%
1989	301	3,4,5	6.0%	6.3%	0.0%	4.7%	2.0%	5.6%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	2.7%	0.0%	0.3%	8.6%	14.0%	0.0%	2.0%	0.0%	44.9%
1990	39	2,4,5	0.0%	0.0%	0.0%	12.8%	0.0%	15.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.1%	12.8%	0.0%	5.1%	0.0%	48.7%
1991	26	2,3,5	3.8%	0.0%	0.0%	0.0%	0.0%	15.4%	0.0%	0.0%	3.8%	0.0%	3.8%	0.0%	7.7%	0.0%	0.0%	53.8%	11.5%	0.0%	0.0%	0.0%	0.0%
1992	74	2,3,4	2.7%	0.0%	0.0%	1.4%	0.0%	33.8%	4.1%	0.0%	4.1%	0.0%	8.1%	0.0%	12.2%	0.0%	0.0%	0.0%	31.1%	0.0%	0.0%	0.0%	2.7%
1993	156	2,3,4,5	12.2%	0.0%	0.0%	0.0%	0.0%	15.4%	10.3%	1.9%	11.5%	0.0%	0.0%	0.0%	2.6%	0.0%	0.0%	0.0%	28.8%	0.0%	2.6%	0.0%	14.7%
1994	87	2,3,4,5	8.0%	0.0%	0.0%	9.2%	0.0%	18.4%	0.0%	4.6%	3.4%	0.0%	8.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	48.3%
1995	145	2,3,4,5	0.0%	0.0%	0.0%	0.0%	2.8%	31.0%	2.8%	0.0%	0.0%	3.4%	6.9%	0.0%	1.4%	0.0%	0.0%	0.7%	13.1%	0.0%	0.0%	0.0%	37.9%
1996	312	2,3,4,5	4.2%	0.0%	0.0%	1.3%	0.0%	1.6%	3.2%	0.0%	3.8%	0.0%	2.6%	0.0%	0.6%	0.0%	0.0%	0.0%	7.4%	0.0%	0.0%	0.0%	75.3%
1997	195	3,4,5	15.4%	0.0%	0.5%	1.5%	0.0%	5.1%	0.0%	0.0%	6.7%	0.0%	3.1%	0.0%	1.0%	0.0%	0.0%	0.0%	13.3%	0.0%	0.0%	0.0%	53.3%
1998	172	4,5	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1999	27	5	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2000	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1979-2010	250		8.2%	0.9%	0.1%	3.5%	0.8%	15.8%	2.5%	0.7%	4.0%	1.0%	3.7%	0.0%	3.1%	0.0%	0.0%	7.7%	14.6%	0.0%	1.1%	0.0%	32.2%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	249		7.9%	1.0%	0.1%	3.9%	1.0%	18.3%	2.7%	0.9%	3.7%	1.1%	3.9%	0.0%	3.5%	0.0%	0.0%	9.3%	15.5%	0.0%	1.3%	0.0%	25.8%
1996-1998	254		9.8%	0.0%	0.3%	1.4%	0.0%	3.4%	1.6%	0.0%	5.3%	0.0%	2.8%	0.0%	0.8%	0.0%	0.0%	0.0%	10.4%	0.0%	0.0%	0.0%	64.3%
1999-2010	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Appendix C.21. Percent distribution of George Adams Fall Fingerling reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			Esc.
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	69	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	256	2,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	611	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	796	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	20.9%	0.0%	0.3%	4.1%	0.5%	0.6%	0.0%	3.0%	0.0%	0.4%	30.4%	10.3%	0.0%	7.7%	0.0%	21.9%
1983	575	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	15.8%	0.5%	0.0%	3.5%	1.6%	5.7%	0.0%	0.2%	0.0%	0.9%	21.0%	24.9%	0.0%	8.7%	0.0%	17.2%
1984	979	3,4,5	0.0%	0.1%	0.0%	0.5%	0.4%	18.1%	0.0%	1.2%	4.5%	3.2%	1.9%	0.0%	2.2%	0.0%	0.4%	12.7%	20.2%	0.0%	18.6%	0.0%	15.9%
1985	348	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	17	5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	83	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	733	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	1655	2,3,4	0.0%	0.1%	0.0%	0.0%	0.0%	8.5%	1.7%	0.0%	3.8%	0.0%	4.8%	0.0%	12.9%	0.2%	0.9%	18.1%	14.9%	0.0%	20.3%	1.5%	12.2%
1990	1340	2,3,4,5	0.1%	0.0%	0.0%	0.4%	0.0%	19.3%	5.0%	0.0%	4.7%	0.3%	1.6%	0.0%	15.0%	0.0%	0.4%	11.3%	17.7%	0.0%	17.0%	0.3%	6.8%
1991	982	2,3,4,5	0.2%	0.0%	0.0%	0.0%	0.0%	18.4%	4.5%	0.0%	2.2%	0.0%	0.4%	0.0%	8.6%	0.0%	0.0%	18.8%	17.2%	0.0%	14.5%	0.8%	14.4%
1992	192	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	15.6%	0.0%	0.0%	2.1%	0.0%	5.7%	0.0%	20.3%	0.0%	0.0%	2.6%	39.6%	0.0%	6.8%	0.0%	7.3%
1993	114	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	34.2%	7.9%	0.9%	3.5%	0.0%	0.0%	0.0%	8.8%	0.0%	0.0%	4.4%	21.9%	0.0%	0.0%	0.0%	18.4%
1994	43	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.0%	7.0%	0.0%	0.0%	0.0%	72.1%
1995	206	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	7.8%	3.9%	0.0%	3.9%	0.0%	2.4%	0.0%	1.0%	0.0%	0.0%	4.4%	18.4%	0.0%	0.0%	0.0%	58.3%
1996	339	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.7%	0.0%	12.7%	0.0%	2.1%	0.0%	5.9%	0.0%	0.6%	0.0%	13.3%	0.0%	0.0%	0.0%	60.8%
1997	340	2,3,4,5	2.1%	0.0%	0.0%	0.0%	0.0%	4.7%	1.5%	0.0%	3.2%	0.0%	0.3%	0.0%	3.2%	0.0%	0.0%	0.9%	20.0%	0.0%	0.0%	0.0%	64.1%
1998	447	2,3,4,5	0.7%	0.2%	0.0%	0.0%	0.0%	0.2%	1.1%	0.0%	0.7%	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%	1.8%	7.2%	0.0%	0.0%	0.0%	86.4%
1999	831	2,3,4,5	0.4%	0.0%	0.0%	0.0%	0.0%	0.8%	9.0%	0.0%	2.5%	0.0%	0.0%	0.0%	4.9%	0.0%	1.3%	2.3%	9.5%	0.0%	0.6%	0.0%	68.6%
2000	826	2,3,4,5	0.4%	0.0%	0.0%	0.4%	0.0%	21.1%	8.5%	0.0%	2.7%	0.0%	0.1%	0.0%	3.5%	0.0%	0.0%	0.4%	5.9%	0.0%	0.0%	11.6%	45.5%
2001	779	2,3,4,5	0.8%	0.0%	0.0%	0.0%	0.1%	12.3%	2.1%	0.0%	2.2%	0.0%	0.0%	0.0%	6.4%	0.0%	1.0%	5.6%	8.5%	0.0%	5.4%	0.5%	55.1%
2002	960	2,3,4,5	1.5%	0.0%	0.0%	1.0%	0.0%	11.3%	10.1%	0.0%	1.8%	0.0%	0.0%	0.0%	4.1%	0.0%	1.0%	7.2%	4.7%	0.0%	3.9%	9.4%	44.2%
2003	951	2,3,4,5	0.5%	0.2%	0.0%	0.0%	0.0%	11.6%	2.0%	0.0%	2.7%	0.0%	0.0%	0.0%	6.4%	0.0%	0.2%	4.2%	6.1%	0.0%	6.3%	11.9%	47.8%
2004	1315	2,3,4,5	0.5%	0.2%	0.0%	0.0%	0.0%	14.7%	3.0%	0.2%	2.3%	0.0%	0.3%	0.0%	6.1%	0.0%	0.5%	7.2%	5.5%	0.0%	4.6%	1.2%	53.7%
2005	1546	2,3,4,5	0.3%	0.1%	0.0%	0.1%	0.8%	11.8%	8.4%	0.0%	5.6%	0.0%	0.0%	0.0%	6.8%	0.0%	1.3%	2.6%	6.8%	0.0%	2.8%	6.3%	46.2%
2006	1086	2,3,4,5	0.4%	0.2%	0.0%	0.7%	0.0%	12.2%	1.8%	0.0%	4.4%	0.0%	0.0%	0.0%	5.2%	0.0%	0.4%	7.6%	8.0%	0.0%	6.3%	1.4%	51.4%
2007	1641	2,3,4,5	0.2%	0.4%	0.0%	0.0%	0.0%	10.1%	1.7%	0.0%	2.4%	0.0%	0.0%	0.0%	3.6%	0.0%	0.2%	2.4%	11.8%	0.0%	10.1%	11.9%	45.3%
2008	1133	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.2%	4.3%	0.0%	2.4%	0.0%	0.0%	0.0%	1.3%	0.4%	0.7%	6.0%	8.7%	0.0%	9.9%	0.0%	62.0%
2009	1227	2,3,4,5	0.0%	0.0%	0.0%	0.1%	0.0%	5.3%	4.2%	0.0%	2.6%	0.0%	0.0%	0.0%	1.5%	0.0%	0.3%	3.8%	6.8%	0.0%	3.4%	0.0%	71.9%
2010	1617	2,3,4,5	0.2%	0.0%	0.0%	0.0%	0.0%	6.6%	3.3%	0.0%	1.0%	0.0%	0.0%	0.0%	2.6%	0.0%	0.2%	6.8%	7.9%	0.0%	14.7%	6.4%	50.3%
1979-2010	877		0.3%	0.1%	0.0%	0.1%	0.1%	11.4%	3.6%	0.4%	3.3%	0.2%	1.0%	0.0%	5.4%	0.0%	0.4%	7.9%	12.9%	0.0%	6.5%	2.5%	43.9%
1979-1984	783		0.0%	0.0%	0.0%	0.2%	0.1%	18.3%	0.2%	0.5%	4.0%	1.7%	2.8%	0.0%	1.8%	0.0%	0.6%	21.4%	18.5%	0.0%	11.6%	0.0%	18.3%
1985-1995	647		0.1%	0.0%	0.0%	0.1%	0.0%	14.8%	3.3%	1.1%	2.9%	0.0%	2.1%	0.0%	9.5%	0.0%	0.2%	10.5%	19.5%	0.0%	8.4%	0.4%	27.1%
1996-1998	375		0.9%	0.1%	0.0%	0.0%	0.0%	1.6%	2.4%	0.0%	5.5%	0.0%	0.8%	0.0%	3.6%	0.0%	0.2%	0.9%	13.5%	0.0%	0.0%	0.0%	70.4%
1999-2010	1159		0.4%	0.1%	0.0%	0.2%	0.1%	10.2%	4.9%	0.0%	2.7%	0.0%	0.0%	0.0%	4.4%	0.0%	0.6%	4.7%	7.5%	0.0%	5.7%	5.1%	53.5%

Appendix C.22. Percent distribution of George Adams Fall Fingerling total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	70	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	404	2,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	710	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	855	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	20.8%	0.0%	0.2%	4.1%	0.6%	0.8%	0.0%	2.9%	0.0%	0.5%	29.4%	12.5%	0.0%	7.8%	0.0%	20.4%
1983	925	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	12.3%	0.3%	0.0%	2.6%	1.2%	4.1%	0.0%	0.1%	0.0%	0.5%	19.5%	40.9%	0.0%	7.8%	0.0%	10.7%
1984	1069	3,4,5	0.0%	0.1%	0.0%	0.6%	0.5%	18.1%	0.0%	1.2%	4.4%	3.2%	1.8%	0.0%	2.3%	0.0%	0.4%	12.8%	22.3%	0.0%	17.9%	0.0%	14.6%
1985	362	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	18	5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	242	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	932	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	2012	2,3,4	0.0%	0.5%	0.0%	0.0%	0.0%	10.0%	1.7%	0.0%	4.4%	0.0%	4.2%	0.0%	12.7%	0.2%	0.8%	17.3%	17.4%	0.0%	19.2%	1.4%	10.0%
1990	1557	2,3,4,5	0.7%	0.0%	0.0%	0.4%	0.0%	21.1%	4.6%	0.0%	5.1%	0.3%	1.5%	0.0%	15.4%	0.0%	0.4%	10.5%	18.2%	0.0%	15.7%	0.3%	5.8%
1991	1063	2,3,4,5	0.2%	0.0%	0.0%	0.0%	0.0%	19.4%	4.5%	0.0%	2.4%	0.0%	0.4%	0.0%	8.7%	0.0%	0.0%	17.9%	18.8%	0.0%	13.7%	0.8%	13.3%
1992	218	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	16.5%	0.0%	0.0%	2.3%	0.0%	5.0%	0.0%	20.2%	0.0%	0.0%	2.3%	41.3%	0.0%	6.0%	0.0%	6.4%
1993	135	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	34.1%	7.4%	1.5%	3.7%	0.0%	0.0%	0.0%	8.1%	0.0%	0.0%	4.4%	25.2%	0.0%	0.0%	0.0%	15.6%
1994	49	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.3%	12.2%	0.0%	0.0%	0.0%	63.3%
1995	260	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	8.8%	3.8%	0.0%	6.5%	0.0%	3.5%	0.0%	0.8%	0.0%	0.0%	4.2%	26.2%	0.0%	0.0%	0.0%	46.2%
1996	370	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	4.6%	0.0%	14.9%	0.0%	2.2%	0.0%	5.7%	0.0%	0.5%	0.0%	15.1%	0.0%	0.0%	0.0%	55.7%
1997	369	2,3,4,5	1.9%	0.0%	0.0%	0.0%	0.0%	5.1%	1.4%	0.0%	3.5%	0.0%	0.5%	0.0%	3.0%	0.0%	0.0%	0.8%	24.7%	0.0%	0.0%	0.0%	59.1%
1998	561	2,3,4,5	0.7%	0.2%	0.0%	0.0%	0.0%	0.2%	1.2%	0.0%	2.1%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	2.1%	23.0%	0.0%	0.0%	0.0%	68.8%
1999	891	2,3,4,5	0.6%	0.0%	0.0%	0.0%	0.0%	0.9%	9.2%	0.0%	3.3%	0.0%	0.0%	0.0%	5.8%	0.0%	1.5%	2.2%	12.0%	0.0%	0.6%	0.0%	64.0%
2000	949	2,3,4,5	0.4%	0.0%	0.0%	0.4%	0.0%	20.5%	9.1%	0.0%	3.6%	0.0%	0.2%	0.0%	3.6%	0.0%	0.0%	0.3%	9.7%	0.0%	0.0%	12.5%	39.6%
2001	873	2,3,4,5	0.9%	0.0%	0.0%	0.0%	0.1%	11.9%	2.3%	0.0%	3.0%	0.0%	0.0%	0.0%	7.0%	0.0%	1.0%	5.6%	13.1%	0.0%	5.4%	0.6%	49.1%
2002	1056	2,3,4,5	1.7%	0.0%	0.0%	1.1%	0.0%	11.0%	11.4%	0.0%	2.2%	0.0%	0.0%	0.0%	4.4%	0.0%	1.0%	7.0%	6.3%	0.0%	3.7%	10.0%	40.2%
2003	1048	2,3,4,5	0.6%	0.4%	0.0%	0.0%	0.0%	11.5%	2.5%	0.0%	3.4%	0.0%	0.0%	0.0%	6.9%	0.0%	0.2%	4.1%	8.2%	0.0%	6.2%	12.7%	43.4%
2004	1456	2,3,4,5	0.5%	0.4%	0.0%	0.0%	0.0%	14.5%	3.4%	0.1%	3.1%	0.0%	0.6%	0.0%	6.7%	0.0%	0.5%	7.6%	7.8%	0.0%	4.9%	1.4%	48.5%
2005	1741	2,3,4,5	0.3%	0.1%	0.0%	0.1%	1.1%	11.3%	9.1%	0.0%	7.4%	0.0%	0.0%	0.0%	7.3%	0.0%	1.3%	2.5%	9.1%	0.0%	2.8%	6.5%	41.1%
2006	1192	2,3,4,5	0.4%	0.3%	0.0%	0.8%	0.0%	11.8%	2.0%	0.0%	5.5%	0.0%	0.0%	0.0%	5.7%	0.0%	0.4%	8.0%	10.3%	0.0%	6.5%	1.5%	46.8%
2007	1978	2,3,4,5	0.3%	0.7%	0.0%	0.0%	0.0%	9.3%	1.7%	0.0%	3.1%	0.0%	0.0%	0.0%	3.6%	0.0%	0.2%	2.6%	17.2%	0.0%	10.6%	13.2%	37.6%
2008	1207	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.1%	4.6%	0.0%	3.0%	0.0%	0.0%	0.0%	1.5%	0.4%	0.7%	6.5%	10.4%	0.0%	10.7%	0.0%	58.2%
2009	1322	2,3,4,5	0.0%	0.0%	0.0%	0.2%	0.0%	5.1%	4.5%	0.0%	3.7%	0.0%	0.0%	0.0%	1.6%	0.0%	0.4%	4.6%	9.2%	0.0%	4.2%	0.0%	66.7%
2010	1744	2,3,4,5	0.2%	0.0%	0.0%	0.0%	0.0%	6.4%	3.9%	0.0%	1.2%	0.0%	0.0%	0.0%	2.9%	0.0%	0.2%	7.1%	9.2%	0.0%	15.2%	7.2%	46.6%
1979-2010	996		0.4%	0.1%	0.0%	0.1%	0.1%	11.4%	3.7%	0.4%	3.9%	0.2%	1.0%	0.0%	5.5%	0.0%	0.4%	7.8%	16.8%	0.0%	6.3%	2.7%	38.9%
1979-1984	950		0.0%	0.0%	0.0%	0.2%	0.2%	17.1%	0.1%	0.5%	3.7%	1.7%	2.2%	0.0%	1.8%	0.0%	0.5%	20.5%	25.2%	0.0%	11.2%	0.0%	15.2%
1985-1995	756		0.1%	0.1%	0.0%	0.1%	0.0%	15.7%	3.2%	1.4%	3.5%	0.1%	2.1%	0.0%	9.4%	0.0%	0.2%	10.4%	22.8%	0.0%	7.8%	0.4%	22.9%
1996-1998	433		0.9%	0.1%	0.0%	0.0%	0.0%	2.2%	2.4%	0.0%	6.8%	0.0%	0.9%	0.0%	3.4%	0.0%	0.2%	1.0%	20.9%	0.0%	0.0%	0.0%	61.2%
1999-2010	1288		0.5%	0.1%	0.0%	0.2%	0.1%	9.9%	5.3%	0.0%	3.5%	0.0%	0.1%	0.0%	4.7%	0.0%	0.6%	4.8%	10.2%	0.0%	5.9%	5.5%	48.5%

Appendix C.23. Percent distribution of Hanford Wild Brights reported catch among fisheries and escapement.

	Estimated		AABM							ISBM													
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	74	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	92	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	440	2,3,4	8.4%	0.5%	0.0%	4.3%	0.0%	8.4%	3.6%	0.0%	0.0%	0.5%	0.7%	0.0%	0.5%	0.0%	0.9%	0.0%	0.0%	0.0%	22.5%	6.1%	43.6%
1991	591	2,3,4,5	8.6%	0.0%	1.4%	9.5%	0.5%	4.7%	0.0%	0.0%	0.8%	0.2%	0.0%	0.0%	1.0%	0.0%	0.5%	0.0%	0.0%	0.0%	23.4%	3.9%	45.5%
1992	289	2,3,4,5	16.3%	2.4%	1.4%	5.9%	0.0%	15.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	1.0%	0.0%	0.0%	0.0%	18.3%	1.7%	36.0%
1993	378	2,3,4,5	14.0%	0.0%	2.1%	2.9%	1.3%	5.3%	1.9%	0.0%	0.0%	0.0%	2.4%	0.0%	3.7%	0.0%	0.0%	0.0%	0.8%	0.0%	16.1%	7.4%	42.1%
1994	725	2,3,4,5	14.3%	1.0%	0.0%	4.8%	0.0%	4.4%	0.0%	0.0%	0.0%	0.3%	1.4%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	12.6%	5.4%	55.2%
1995	655	2,3,4,5	11.0%	0.0%	3.7%	4.3%	0.0%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.8%	7.0%	62.0%
1996	591	2,3,4,5	9.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	28.4%	7.8%	53.5%
1997	633	2,3,4,5	16.3%	0.8%	0.9%	3.6%	2.4%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	13.9%	7.0%	53.4%
1998	324	2,3,4,5	12.3%	0.0%	0.0%	8.6%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.6%	6.5%	54.3%
1999	259	2,3,4,5	9.7%	0.4%	1.9%	12.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.0%	6.2%	57.9%
2000	219	2,3,4,5	16.4%	0.5%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	29.2%	5.5%	46.6%
2001	343	2,3,4,5	4.4%	0.3%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	20.7%	14.6%	58.0%
2002	841	2,3,4,5	13.9%	0.0%	1.3%	0.7%	0.5%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.2%	0.0%	0.0%	0.0%	10.0%	10.7%	58.3%
2003	1488	2,3,4,5	12.6%	0.0%	0.9%	3.9%	0.9%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.3%	0.0%	0.0%	0.0%	14.3%	9.2%	57.0%
2004	1808	2,3,4,5	17.3%	1.4%	2.9%	6.1%	2.9%	2.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.2%	0.3%	0.0%	0.0%	0.0%	13.5%	4.0%	48.0%
2005	445	2,3,4,5	11.9%	0.0%	0.0%	8.1%	2.5%	4.3%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	2.7%	0.0%	1.1%	0.0%	0.0%	0.0%	12.4%	15.3%	41.1%
2006	542	2,3,4,5	17.2%	0.0%	0.9%	5.0%	0.0%	2.8%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	15.3%	19.4%	36.5%
2007	276	2,3,4,5	20.7%	0.0%	1.1%	6.5%	6.5%	2.9%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	7.2%	17.8%	35.1%
2008	194	2,3,4,5	25.8%	0.0%	4.6%	1.5%	2.1%	3.6%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.1%	7.7%	32.5%
2009	215	2,3,4,5	18.1%	0.0%	0.9%	3.7%	1.9%	1.4%	5.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	51.6%	4.7%	12.1%
2010	472	3,4,5	14.8%	0.0%	4.9%	7.2%	2.8%	0.8%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	0.0%	0.4%	0.0%	0.0%	0.0%	11.7%	5.1%	49.4%
1979-2010	558		14.0%	0.3%	1.5%	4.7%	1.2%	3.0%	0.8%	0.0%	0.0%	0.0%	0.3%	0.0%	0.9%	0.0%	0.2%	0.0%	0.0%	0.0%	18.1%	8.2%	46.6%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	513		12.1%	0.6%	1.4%	5.3%	0.3%	6.8%	0.9%	0.0%	0.1%	0.1%	0.7%	0.0%	1.2%	0.0%	0.4%	0.0%	0.1%	0.0%	17.1%	5.3%	47.4%
1996-1998	516		12.8%	0.3%	0.3%	4.1%	1.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	7.1%	53.7%
1999-2010	592		15.2%	0.2%	1.8%	4.6%	1.7%	1.8%	1.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.8%	0.0%	0.2%	0.0%	0.0%	0.0%	18.2%	10.0%	44.4%

Appendix C.24. Percent distribution of Hanford Wild Brights total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM														Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal				
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	109	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	119	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	478	2,3,4	9.2%	1.0%	0.4%	4.8%	0.0%	8.8%	3.6%	0.0%	0.0%	0.4%	0.6%	0.0%	0.6%	0.0%	0.8%	0.0%	0.0%	0.0%	23.2%	6.3%	40.2%
1991	624	2,3,4,5	10.6%	0.0%	1.4%	10.3%	0.5%	5.1%	0.0%	0.0%	1.0%	0.2%	0.0%	0.0%	1.1%	0.0%	0.5%	0.0%	0.0%	0.0%	22.4%	3.8%	43.1%
1992	371	2,3,4,5	15.9%	15.6%	1.3%	5.9%	0.0%	15.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.8%	0.0%	0.0%	0.0%	15.1%	1.3%	28.0%
1993	424	2,3,4,5	19.3%	0.0%	2.1%	3.1%	1.2%	6.1%	1.9%	0.0%	0.0%	0.0%	2.1%	0.0%	3.8%	0.0%	0.0%	0.0%	0.9%	0.0%	14.9%	7.1%	37.5%
1994	786	2,3,4,5	16.8%	3.3%	0.0%	5.1%	0.0%	4.7%	0.0%	0.0%	0.0%	0.3%	1.3%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	11.8%	5.2%	50.9%
1995	693	2,3,4,5	13.1%	0.0%	4.2%	5.1%	0.0%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.4%	6.9%	58.6%
1996	629	2,3,4,5	12.7%	0.0%	0.0%	1.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	27.2%	7.6%	50.2%
1997	665	2,3,4,5	17.7%	1.2%	1.1%	3.6%	3.3%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	13.5%	6.9%	50.8%
1998	342	2,3,4,5	14.3%	0.0%	0.0%	9.6%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.3%	6.4%	51.5%
1999	281	2,3,4,5	13.2%	1.1%	2.1%	12.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.7%	6.0%	53.4%
2000	236	2,3,4,5	19.9%	0.4%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	28.4%	5.5%	43.2%
2001	364	2,3,4,5	6.0%	0.8%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	21.2%	14.8%	54.7%
2002	900	2,3,4,5	17.9%	0.0%	1.4%	0.8%	0.6%	2.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	0.2%	0.0%	0.0%	0.0%	9.7%	10.6%	54.4%
2003	1532	2,3,4,5	13.7%	0.0%	0.9%	4.1%	1.2%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.3%	0.0%	0.0%	0.0%	14.1%	9.3%	55.4%
2004	1916	2,3,4,5	18.5%	2.0%	3.0%	6.5%	4.2%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.2%	0.4%	0.0%	0.0%	0.0%	12.9%	4.0%	45.3%
2005	470	2,3,4,5	13.2%	0.0%	0.0%	8.7%	3.2%	4.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	1.1%	0.0%	0.0%	0.0%	11.9%	15.3%	38.9%
2006	569	2,3,4,5	19.0%	0.0%	1.1%	5.3%	0.0%	2.6%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	14.8%	19.3%	34.8%
2007	308	2,3,4,5	23.4%	0.0%	1.3%	6.8%	8.4%	2.6%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	6.8%	16.9%	31.5%
2008	228	2,3,4,5	32.9%	0.0%	5.3%	1.8%	2.2%	3.1%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	18.0%	7.0%	27.6%
2009	233	2,3,4,5	20.2%	0.0%	0.9%	3.9%	2.1%	1.3%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	49.8%	4.7%	11.2%
2010	489	3,4,5	16.0%	0.0%	4.9%	7.2%	3.3%	0.8%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	0.0%	0.4%	0.0%	0.0%	0.0%	11.5%	5.1%	47.6%
1979-2010	597		16.4%	1.2%	1.7%	5.0%	1.5%	3.1%	0.9%	0.0%	0.0%	0.0%	0.3%	0.0%	0.9%	0.0%	0.2%	0.0%	0.0%	0.0%	17.4%	8.1%	43.3%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	563		14.2%	3.3%	1.6%	5.7%	0.3%	7.1%	0.9%	0.0%	0.2%	0.1%	0.7%	0.0%	1.2%	0.0%	0.4%	0.0%	0.2%	0.0%	16.1%	5.1%	43.0%
1996-1998	545		14.9%	0.4%	0.4%	4.7%	1.4%	0.5%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	19.3%	7.0%	50.8%
1999-2010	627		17.8%	0.4%	2.0%	4.8%	2.1%	1.7%	1.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.9%	0.0%	0.2%	0.0%	0.0%	0.0%	17.6%	9.9%	41.5%

Appendix C.25. Percent distribution of Harrison River (Fraser Late) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	795	2	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	2539	2,3	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	1687	2,3,4	0.1%	0.0%	0.0%	1.2%	0.0%	25.0%	0.7%	7.5%	27.4%	1.7%	5.2%	0.0%	1.1%	0.0%	0.2%	4.2%	3.4%	0.0%	0.0%	0.2%	22.1%
1986	835	2,3,4,5	1.4%	0.0%	0.0%	0.5%	0.4%	18.2%	0.5%	17.0%	24.4%	2.9%	12.2%	0.0%	0.0%	0.0%	0.0%	1.2%	3.7%	0.0%	0.0%	0.0%	17.6%
1987	459	2,3,4,5	0.7%	0.0%	0.0%	0.0%	0.0%	9.4%	0.0%	8.7%	27.9%	0.7%	5.9%	0.0%	3.5%	0.0%	0.4%	8.5%	2.0%	0.0%	0.0%	0.0%	32.5%
1988	756	2,3,4,5	0.7%	0.0%	0.5%	0.0%	1.1%	4.8%	5.2%	14.6%	19.2%	1.6%	10.3%	0.0%	6.3%	0.0%	0.0%	14.3%	4.1%	0.0%	0.0%	0.7%	16.8%
1989	1976	2,3,4,5	0.2%	0.0%	0.0%	0.3%	0.0%	22.6%	1.2%	5.2%	21.0%	0.6%	6.6%	0.0%	6.5%	0.0%	0.1%	5.3%	4.7%	0.0%	0.0%	0.0%	25.7%
1990	2632	2,3,4,5	0.3%	0.0%	0.0%	0.8%	0.0%	20.2%	1.2%	4.4%	10.3%	0.7%	3.0%	0.0%	5.8%	0.0%	0.2%	3.0%	4.5%	0.0%	0.0%	0.3%	45.4%
1991	1271	2,3,4,5	0.0%	0.1%	0.0%	0.0%	0.3%	28.0%	0.0%	7.3%	10.2%	0.3%	6.8%	0.0%	12.1%	0.0%	0.0%	2.6%	4.3%	0.0%	0.0%	0.5%	27.5%
1992	1424	2,3,4,5	0.0%	0.0%	0.0%	0.4%	0.0%	17.1%	0.0%	10.9%	11.4%	0.1%	2.2%	0.0%	11.2%	0.0%	0.0%	1.2%	6.7%	0.0%	0.0%	0.3%	38.4%
1993	1048	2,3,4,5	0.8%	0.0%	0.0%	0.3%	0.0%	17.3%	0.0%	5.4%	7.0%	0.4%	3.1%	0.0%	9.4%	0.0%	0.0%	0.6%	1.9%	0.0%	0.0%	0.0%	53.8%
1994	410	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	17.1%	2.0%	8.0%	5.4%	0.0%	4.9%	0.0%	3.4%	0.0%	0.0%	2.9%	1.7%	0.0%	0.0%	1.0%	53.7%
1995	235	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	1.7%	0.0%	12.3%	0.0%	6.8%	0.0%	12.3%	0.0%	0.4%	5.5%	2.1%	0.0%	0.0%	1.3%	37.4%
1996	918	2,3,4,5	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	15.0%	0.0%	0.9%	0.0%	4.8%	0.0%	0.0%	0.0%	5.3%	0.0%	0.0%	0.0%	73.6%
1997	760	2,3,4,5	1.4%	0.0%	0.0%	0.0%	0.3%	11.3%	3.8%	0.3%	15.9%	0.0%	3.0%	0.0%	10.3%	0.0%	0.0%	3.3%	5.3%	0.0%	0.0%	0.0%	45.1%
1998	1122	2,3,4,5	0.7%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	2.9%	0.0%	0.3%	0.0%	4.9%	0.0%	0.0%	0.2%	0.2%	0.0%	0.0%	0.0%	90.3%
1999	1220	2,3,4,5	0.2%	0.2%	0.0%	0.4%	0.7%	0.6%	1.7%	0.0%	6.7%	0.2%	0.7%	0.0%	12.1%	0.0%	0.3%	0.8%	0.4%	0.0%	0.0%	0.2%	74.6%
2000	631	2,3,4,5	1.4%	0.0%	0.0%	0.5%	0.0%	11.9%	3.5%	0.0%	8.4%	0.0%	0.0%	0.0%	12.4%	0.0%	0.0%	0.6%	0.5%	0.0%	0.0%	0.0%	60.9%
2001	772	2,3,4,5	0.3%	0.0%	0.0%	0.0%	0.0%	6.6%	2.2%	0.0%	5.2%	0.0%	0.0%	0.0%	7.0%	0.0%	1.7%	1.3%	1.2%	0.0%	0.0%	0.0%	74.6%
2002	336	2,3,4,5	0.6%	0.0%	0.0%	0.0%	0.0%	13.7%	3.0%	0.0%	7.1%	0.0%	1.8%	0.0%	15.5%	0.0%	1.5%	3.0%	3.9%	0.0%	0.0%	0.0%	50.0%
2003	536	2,3,4,5	0.9%	0.0%	0.0%	0.0%	0.0%	7.5%	3.2%	0.0%	3.2%	0.0%	1.5%	0.0%	6.2%	0.0%	1.1%	0.2%	0.7%	0.0%	0.0%	0.0%	75.6%
2004	518	2,3,4,5	1.0%	0.0%	0.0%	0.8%	0.0%	18.0%	6.0%	0.0%	0.8%	0.0%	2.7%	0.0%	14.5%	0.0%	0.4%	0.2%	2.3%	0.0%	0.0%	0.0%	53.5%
2005	679	2,3,4,5	0.0%	0.0%	0.0%	0.3%	2.2%	14.0%	3.5%	0.0%	3.7%	0.0%	5.3%	0.0%	5.7%	0.0%	2.5%	0.4%	0.3%	0.0%	0.0%	0.0%	62.0%
2006	426	3,4,5	0.9%	0.0%	0.0%	0.5%	0.0%	22.8%	5.9%	0.0%	2.3%	0.0%	0.0%	0.0%	15.3%	0.0%	0.9%	0.0%	0.5%	0.0%	0.0%	0.0%	50.9%
2007	786	2,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	9.8%	1.1%	0.0%	1.3%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	86.6%
2008	840	2,3,5	0.4%	0.2%	0.0%	0.0%	0.0%	30.7%	12.6%	0.0%	5.4%	0.0%	0.6%	0.0%	5.4%	0.0%	1.2%	2.3%	1.3%	0.0%	0.0%	0.0%	40.0%
2009	2122	2,3,4	0.0%	0.0%	0.0%	0.1%	0.0%	1.2%	3.5%	0.0%	3.3%	0.0%	1.4%	0.0%	0.8%	0.0%	0.1%	0.1%	1.6%	0.0%	0.0%	0.8%	87.0%
2010	1841	2,3,4,5	0.3%	0.0%	0.0%	0.1%	0.9%	3.0%	2.8%	0.0%	2.8%	0.0%	1.1%	0.0%	2.5%	0.0%	0.8%	0.4%	1.4%	0.0%	0.0%	0.3%	83.6%
1979-2010	1009		0.5%	0.0%	0.0%	0.2%	0.2%	13.5%	2.5%	3.4%	10.0%	0.4%	3.3%	0.0%	7.3%	0.0%	0.5%	2.4%	2.5%	0.0%	0.0%	0.2%	53.0%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	1158		0.4%	0.0%	0.0%	0.3%	0.2%	18.1%	1.1%	8.1%	16.0%	0.8%	6.1%	0.0%	6.5%	0.0%	0.1%	4.5%	3.6%	0.0%	0.0%	0.4%	33.7%
1996-1998	933		0.7%	0.0%	0.0%	0.0%	0.1%	4.0%	1.3%	0.1%	11.3%	0.0%	1.4%	0.0%	6.7%	0.0%	0.0%	1.2%	3.6%	0.0%	0.0%	0.0%	69.7%
1999-2010	892		0.5%	0.0%	0.0%	0.2%	0.3%	11.6%	4.1%	0.0%	4.2%	0.0%	1.3%	0.0%	8.2%	0.0%	0.9%	0.8%	1.2%	0.0%	0.0%	0.1%	66.6%

Appendix C.26. Percent distribution of Harrison River (Fraser Late) total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	1370	2	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	2960	2,3	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	1862	2,3,4	0.3%	0.0%	0.0%	1.2%	0.1%	25.1%	0.7%	8.9%	27.1%	1.8%	5.0%	0.0%	1.1%	0.0%	0.2%	4.5%	3.8%	0.0%	0.0%	0.2%	20.0%
1986	921	2,3,4,5	1.7%	0.0%	0.0%	0.4%	0.4%	18.2%	0.4%	19.2%	24.1%	2.8%	11.3%	0.0%	0.0%	0.0%	0.0%	1.2%	4.1%	0.0%	0.0%	0.0%	16.0%
1987	532	2,3,4,5	0.9%	0.0%	0.0%	0.0%	0.0%	10.2%	0.0%	9.4%	27.6%	0.8%	5.5%	0.0%	3.8%	0.0%	0.4%	11.1%	2.4%	0.0%	0.0%	0.0%	28.0%
1988	1298	2,3,4,5	0.5%	0.0%	0.8%	0.0%	0.9%	3.8%	3.7%	11.6%	33.6%	1.3%	6.8%	0.0%	4.9%	0.0%	0.0%	14.9%	7.1%	0.0%	0.0%	0.4%	9.8%
1989	2367	2,3,4,5	0.2%	0.0%	0.0%	0.3%	0.0%	24.4%	1.1%	5.6%	23.8%	0.7%	5.7%	0.0%	6.7%	0.0%	0.1%	5.2%	4.9%	0.0%	0.0%	0.0%	21.5%
1990	2913	2,3,4,5	0.5%	0.0%	0.0%	0.8%	0.0%	20.0%	1.2%	4.4%	11.8%	0.7%	2.9%	0.0%	6.0%	0.0%	0.1%	4.3%	5.9%	0.0%	0.0%	0.3%	41.1%
1991	1585	2,3,4,5	0.0%	0.1%	0.0%	0.0%	0.3%	29.7%	0.0%	8.4%	12.9%	0.3%	5.7%	0.0%	12.2%	0.0%	0.0%	2.9%	5.0%	0.0%	0.0%	0.4%	22.0%
1992	1668	2,3,4,5	0.0%	0.0%	0.0%	0.4%	0.0%	18.8%	0.0%	12.5%	12.8%	0.2%	2.0%	0.0%	11.7%	0.0%	0.0%	1.3%	7.3%	0.0%	0.0%	0.2%	32.8%
1993	1141	2,3,4,5	1.1%	0.0%	0.0%	0.4%	0.0%	19.1%	0.0%	6.2%	7.6%	0.4%	3.1%	0.0%	10.0%	0.0%	0.0%	0.5%	2.2%	0.0%	0.0%	0.0%	49.4%
1994	452	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	19.0%	2.0%	8.8%	6.4%	0.0%	5.1%	0.0%	3.3%	0.0%	0.0%	3.5%	2.2%	0.0%	0.0%	0.9%	48.7%
1995	330	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	21.2%	1.5%	0.0%	22.7%	0.0%	6.1%	0.0%	9.7%	0.0%	0.6%	6.7%	3.9%	0.0%	0.0%	0.9%	26.7%
1996	1094	2,3,4,5	0.0%	0.3%	0.0%	0.0%	0.0%	1.6%	0.2%	0.0%	23.2%	0.0%	0.9%	0.0%	4.4%	0.0%	0.0%	0.0%	7.6%	0.0%	0.0%	0.0%	61.8%
1997	868	2,3,4,5	1.8%	0.0%	0.0%	0.0%	0.3%	13.5%	3.6%	0.3%	18.9%	0.0%	3.0%	0.0%	9.6%	0.0%	0.0%	3.3%	6.1%	0.0%	0.0%	0.0%	39.5%
1998	1141	2,3,4,5	0.9%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	3.7%	0.0%	0.4%	0.0%	5.1%	0.0%	0.0%	0.3%	0.4%	0.0%	0.0%	0.0%	88.8%
1999	1295	2,3,4,5	0.3%	0.5%	0.0%	0.5%	0.8%	0.6%	1.8%	0.0%	8.4%	0.3%	0.6%	0.0%	13.8%	0.0%	0.4%	0.9%	0.5%	0.0%	0.0%	0.2%	70.3%
2000	668	2,3,4,5	1.8%	0.0%	0.0%	0.4%	0.0%	12.0%	3.7%	0.0%	9.9%	0.0%	0.0%	0.0%	13.3%	0.0%	0.0%	0.7%	0.6%	0.0%	0.0%	0.0%	57.5%
2001	826	2,3,4,5	0.5%	0.0%	0.0%	0.0%	0.0%	6.7%	2.5%	0.0%	7.3%	0.0%	0.0%	0.0%	7.7%	0.0%	1.8%	1.6%	2.2%	0.0%	0.0%	0.0%	69.7%
2002	393	2,3,4,5	0.5%	0.0%	0.0%	0.0%	0.0%	12.5%	3.1%	0.0%	8.1%	0.0%	7.9%	0.0%	15.0%	0.0%	1.5%	3.3%	5.3%	0.0%	0.0%	0.0%	42.7%
2003	573	2,3,4,5	1.0%	0.0%	0.0%	0.0%	0.0%	7.9%	4.2%	0.0%	4.9%	0.0%	1.6%	0.0%	7.0%	0.0%	1.2%	0.3%	1.2%	0.0%	0.0%	0.0%	70.7%
2004	554	2,3,4,5	1.4%	0.0%	0.0%	0.9%	0.0%	17.5%	6.7%	0.0%	0.9%	0.0%	2.5%	0.0%	16.2%	0.0%	0.5%	0.2%	3.1%	0.0%	0.0%	0.0%	50.0%
2005	718	2,3,4,5	0.0%	0.0%	0.0%	0.3%	3.1%	14.2%	4.0%	0.0%	4.6%	0.0%	5.2%	0.0%	6.4%	0.0%	2.6%	0.6%	0.4%	0.0%	0.0%	0.0%	58.6%
2006	443	3,4,5	1.1%	0.0%	0.0%	0.5%	0.0%	22.3%	6.5%	0.0%	2.7%	0.0%	0.0%	0.0%	16.3%	0.0%	0.9%	0.0%	0.7%	0.0%	0.0%	0.0%	49.0%
2007	878	2,4,5	0.1%	0.0%	0.0%	0.0%	0.0%	11.8%	2.4%	0.0%	4.1%	0.0%	0.1%	0.0%	1.5%	0.0%	0.1%	0.8%	1.5%	0.0%	0.0%	0.0%	77.6%
2008	909	2,3,5	0.4%	0.3%	0.0%	0.0%	0.2%	29.2%	14.0%	0.0%	7.3%	0.0%	0.6%	0.0%	5.7%	0.0%	1.2%	2.3%	1.9%	0.0%	0.0%	0.0%	37.0%
2009	2290	2,3,4	0.1%	0.0%	0.0%	0.2%	0.2%	1.5%	4.1%	0.0%	5.9%	0.0%	1.5%	0.0%	1.4%	0.0%	0.3%	0.3%	3.1%	0.0%	0.0%	0.9%	80.6%
2010	1898	2,3,4,5	0.5%	0.0%	0.0%	0.1%	1.1%	3.0%	3.3%	0.0%	3.5%	0.0%	1.2%	0.0%	3.0%	0.0%	0.8%	0.5%	1.6%	0.0%	0.0%	0.3%	81.1%
1979-2010	1139		0.6%	0.0%	0.0%	0.2%	0.3%	14.0%	2.7%	3.7%	12.5%	0.4%	3.2%	0.0%	7.5%	0.0%	0.5%	2.7%	3.3%	0.0%	0.0%	0.2%	48.1%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	1370		0.5%	0.0%	0.1%	0.3%	0.2%	19.0%	1.0%	8.6%	19.1%	0.8%	5.4%	0.0%	6.3%	0.0%	0.1%	5.1%	4.4%	0.0%	0.0%	0.3%	28.7%
1996-1998	1034		0.9%	0.1%	0.0%	0.0%	0.1%	5.2%	1.3%	0.1%	15.3%	0.0%	1.4%	0.0%	6.3%	0.0%	0.0%	1.2%	4.7%	0.0%	0.0%	0.0%	63.4%
1999-2010	954		0.7%	0.1%	0.0%	0.2%	0.4%	11.6%	4.7%	0.0%	5.6%	0.0%	1.8%	0.0%	8.9%	0.0%	1.0%	1.0%	1.8%	0.0%	0.0%	0.1%	62.1%

Appendix C.27. Percent distribution of Hoko Fall Fingerling reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM														Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal				
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	74	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	248	2,3,4	4.8%	0.8%	0.0%	7.7%	0.0%	10.9%	0.0%	0.0%	1.6%	0.4%	21.4%	0.0%	0.8%	0.0%	0.4%	0.4%	21.4%	0.0%	0.0%	0.0%	29.4%
1990	587	3,4,5	15.8%	1.7%	0.5%	8.0%	0.0%	17.0%	0.0%	0.5%	0.3%	0.7%	4.3%	0.0%	0.5%	0.0%	0.0%	0.7%	14.5%	0.0%	0.2%	0.0%	35.3%
1991	1242	2,4,5,6	15.2%	0.0%	0.0%	5.0%	0.6%	6.9%	0.5%	0.0%	0.4%	1.1%	1.0%	0.0%	0.2%	0.0%	0.1%	1.0%	8.1%	0.0%	0.1%	0.0%	59.8%
1992	572	2,3,5,6	7.7%	1.7%	1.2%	4.4%	0.7%	9.8%	2.1%	0.0%	0.5%	1.2%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	0.0%	0.2%	0.0%	66.6%
1993	303	2,3,4,6	6.6%	0.0%	2.0%	6.6%	0.0%	14.9%	0.0%	0.0%	0.3%	0.0%	5.3%	0.0%	0.0%	0.0%	0.3%	0.0%	4.3%	0.0%	0.3%	0.0%	59.4%
1994	332	2,3,4,5	13.6%	2.4%	2.4%	14.8%	0.0%	11.4%	2.1%	0.0%	2.1%	0.6%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	47.9%
1995	747	2,3,4,5,6	12.4%	0.0%	4.1%	6.2%	0.5%	2.9%	0.0%	0.0%	0.8%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	71.9%
1996	638	2,3,4,5,6	10.3%	0.0%	3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	85.4%
1997	880	2,3,4,5,6	13.6%	0.0%	0.0%	1.5%	0.5%	1.0%	0.6%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	82.2%
1998	1130	2,3,4,5,6	9.0%	0.0%	0.4%	5.9%	0.0%	0.0%	0.4%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	84.1%
1999	751	2,3,4,5,6	6.4%	0.0%	0.7%	7.2%	1.2%	0.0%	1.3%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	82.8%
2000	503	2,3,4,5,6	4.4%	0.2%	1.8%	0.0%	0.0%	0.2%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	92.0%
2001	515	2,3,4,5,6	6.0%	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	90.1%
2002	668	2,3,4,5,6	17.2%	0.0%	0.9%	4.3%	2.8%	1.5%	0.0%	0.0%	1.9%	0.3%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	69.9%
2003	954	2,3,4,5,6	13.6%	0.1%	2.6%	3.0%	0.0%	0.0%	0.5%	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	78.4%
2004	1059	2,3,4,5,6	10.9%	0.0%	1.0%	8.3%	1.5%	0.7%	0.8%	0.0%	4.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.4%	0.0%	0.0%	0.0%	71.4%
2005	589	2,3,4,5,6	11.2%	0.0%	1.2%	11.0%	5.3%	0.0%	1.2%	0.0%	4.9%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	63.7%
2006	770	2,3,4,5,6	9.9%	1.0%	2.2%	5.8%	3.4%	0.0%	1.3%	0.0%	0.6%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	74.5%
2007	291	2,3,4,5,6	15.8%	0.3%	4.1%	7.2%	5.2%	0.7%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	1.0%	0.0%	0.0%	0.0%	63.6%
2008	80	2,3,4,5,6	17.5%	0.0%	5.0%	7.5%	13.8%	0.0%	0.0%	0.0%	3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	52.5%
2009	302	2,3,4,5,6	8.3%	0.0%	0.0%	6.3%	0.7%	0.0%	1.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	80.8%
2010	684	2,3,4,5,6	1.5%	0.0%	1.5%	3.2%	0.6%	0.7%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	90.6%
1979-2010	629		10.5%	0.4%	1.7%	5.6%	1.7%	3.6%	0.6%	0.0%	1.4%	0.2%	1.7%	0.0%	0.2%	0.0%	0.2%	0.1%	2.5%	0.0%	0.1%	0.0%	69.7%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	576		10.9%	1.0%	1.5%	7.5%	0.3%	10.6%	0.7%	0.1%	0.9%	0.6%	5.2%	0.0%	0.2%	0.0%	0.1%	0.3%	7.3%	0.0%	0.1%	0.0%	52.9%
1996-1998	883		11.0%	0.0%	1.4%	2.5%	0.2%	0.3%	0.3%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.2%	0.0%	83.9%
1999-2010	597		10.2%	0.1%	1.9%	5.3%	2.9%	0.3%	0.6%	0.0%	2.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.2%	0.0%	0.3%	0.0%	0.0%	0.0%	75.9%

Appendix C.28. Percent distribution of Hoko Fall Fingerling total fishing mortalities among fisheries and escapement.

	Estimated		AABM							ISBM													
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	8	2	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	137	2,3	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	353	2,3,4	10.8%	3.7%	0.3%	8.5%	0.0%	13.6%	0.0%	0.0%	1.7%	0.8%	16.1%	0.0%	0.6%	0.0%	0.6%	1.4%	21.2%	0.0%	0.0%	0.0%	20.7%
1990	676	3,4,5	18.2%	4.1%	0.6%	8.3%	0.0%	17.2%	0.0%	0.4%	0.3%	0.7%	3.7%	0.0%	0.6%	0.0%	0.0%	0.6%	14.5%	0.0%	0.1%	0.0%	30.6%
1991	1327	2,4,5,6	18.1%	0.0%	0.1%	5.2%	0.5%	7.1%	0.5%	0.0%	0.5%	1.1%	0.9%	0.0%	0.2%	0.0%	0.1%	0.9%	8.8%	0.0%	0.1%	0.0%	56.0%
1992	668	2,3,5,6	8.1%	10.5%	1.5%	4.9%	0.6%	9.7%	1.9%	0.0%	0.6%	1.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	0.0%	0.1%	0.0%	57.0%
1993	348	2,3,4,6	11.8%	1.1%	2.3%	7.5%	0.0%	14.9%	0.0%	0.0%	0.9%	0.0%	4.6%	0.0%	0.0%	0.0%	0.6%	0.0%	4.3%	0.0%	0.3%	0.0%	51.7%
1994	404	2,3,4,5	19.3%	8.2%	2.7%	13.1%	0.0%	10.4%	1.7%	0.0%	2.0%	0.5%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	39.4%
1995	820	2,3,4,5,6	16.2%	0.0%	4.8%	7.1%	0.6%	3.5%	0.0%	0.0%	1.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	65.5%
1996	685	2,3,4,5,6	13.6%	0.0%	4.4%	0.7%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	79.6%
1997	914	2,3,4,5,6	16.2%	0.0%	0.0%	1.6%	0.5%	1.2%	0.5%	0.0%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	79.1%
1998	1147	2,3,4,5,6	9.9%	0.0%	0.3%	6.4%	0.0%	0.0%	0.3%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	82.8%
1999	772	2,3,4,5,6	7.8%	0.0%	0.6%	7.8%	1.4%	0.0%	1.4%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	80.6%
2000	521	2,3,4,5,6	6.0%	0.2%	2.9%	0.0%	0.0%	0.2%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	88.9%
2001	541	2,3,4,5,6	8.3%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	85.8%
2002	711	2,3,4,5,6	19.7%	0.0%	0.8%	4.8%	3.7%	1.7%	0.0%	0.0%	2.3%	0.3%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	65.7%
2003	980	2,3,4,5,6	14.8%	0.1%	2.9%	3.3%	0.0%	0.0%	0.7%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	76.3%
2004	1122	2,3,4,5,6	12.2%	0.0%	1.2%	9.2%	2.3%	0.7%	1.0%	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.4%	0.0%	0.0%	0.0%	67.4%
2005	639	2,3,4,5,6	12.7%	0.2%	1.3%	12.1%	6.7%	0.0%	1.3%	0.0%	5.5%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	58.7%
2006	800	2,3,4,5,6	10.8%	1.5%	2.4%	6.3%	4.0%	0.0%	1.4%	0.0%	0.8%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	71.8%
2007	308	2,3,4,5,6	16.9%	0.3%	4.5%	7.5%	6.5%	0.6%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	1.3%	0.0%	0.0%	0.0%	60.1%
2008	94	2,3,4,5,6	20.2%	0.0%	6.4%	7.4%	16.0%	0.0%	0.0%	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	44.7%
2009	339	2,3,4,5,6	11.5%	0.0%	0.0%	8.0%	1.5%	0.0%	1.2%	0.0%	3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	0.0%	0.0%	0.0%	72.0%
2010	706	2,3,4,5,6	2.0%	0.0%	2.3%	4.1%	0.8%	0.7%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	87.8%
1979-2010	676		12.9%	1.4%	2.1%	6.1%	2.1%	3.8%	0.6%	0.0%	1.7%	0.2%	1.4%	0.0%	0.2%	0.0%	0.2%	0.1%	2.6%	0.0%	0.0%	0.0%	64.6%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	657		14.6%	3.9%	1.7%	7.8%	0.2%	10.9%	0.6%	0.1%	1.0%	0.6%	4.3%	0.0%	0.2%	0.0%	0.2%	0.4%	7.5%	0.0%	0.1%	0.0%	45.8%
1996-1998	915		13.2%	0.0%	1.6%	2.9%	0.2%	0.8%	0.3%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	80.5%
1999-2010	628		11.9%	0.2%	2.3%	5.9%	3.6%	0.3%	0.7%	0.0%	2.5%	0.0%	0.0%	0.0%	0.3%	0.0%	0.2%	0.0%	0.4%	0.0%	0.0%	0.0%	71.6%

Appendix C.29. Percent distribution of Kitsumkalum River Summer (North/Central BC) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	5	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	20	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	65	3,4,5	50.8%	0.0%	0.0%	18.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	30.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	184	4,5,6	26.1%	0.0%	1.6%	7.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	13.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	51.6%
1986	213	3,5,6	8.9%	0.0%	0.0%	14.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	65.7%
1987	231	3,4,6	7.4%	0.0%	0.0%	9.1%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	7.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	71.4%
1988	161	3,4,5	17.4%	0.6%	1.9%	3.1%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	23.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	46.6%
1989	800	3,4,5,6	10.9%	0.3%	6.8%	5.0%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%	11.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.4%	59.1%
1990	610	3,4,5,6	10.7%	0.0%	2.8%	6.7%	1.8%	0.0%	0.0%	0.0%	0.0%	0.3%	7.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.2%	64.4%
1991	294	3,4,5,6	14.6%	0.0%	3.7%	8.8%	6.8%	0.0%	0.0%	0.0%	0.0%	0.7%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.8%	41.8%
1992	669	3,4,5,6	13.9%	0.0%	1.9%	7.0%	5.4%	0.4%	0.0%	0.0%	0.0%	0.0%	9.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	60.7%
1993	230	3,4,5,6	10.4%	0.9%	2.2%	10.0%	4.3%	0.0%	0.0%	0.0%	0.0%	0.0%	18.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	53.5%
1994	124	3,4,5,6	11.3%	0.0%	0.0%	5.6%	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	19.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	58.9%
1995	184	3,4,5,6	12.0%	0.0%	2.7%	7.1%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	28.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	42.4%
1996	505	3,4,5,6	8.5%	0.2%	6.1%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	17.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	63.8%
1997	610	3,4,5,6	10.7%	0.0%	7.7%	0.0%	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	7.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.1%	64.1%
1998	490	3,4,5,6	8.6%	0.0%	3.1%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%	81.6%
1999	716	3,4,5,6	14.7%	0.0%	8.9%	0.0%	9.9%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	62.7%
2000	332	3,4,5,6	8.1%	0.0%	7.8%	0.0%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.6%	66.9%
2001	520	3,4,5,6	10.0%	0.0%	8.7%	0.6%	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	9.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.7%	63.7%
2002	914	3,4,5,6	13.8%	0.2%	5.7%	1.5%	10.2%	0.0%	0.0%	0.0%	0.5%	0.0%	3.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	62.9%
2003	604	3,4,5,6	13.9%	0.0%	1.7%	5.1%	5.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%	69.9%
2004	904	3,4,5,6	8.1%	2.4%	5.4%	0.9%	7.7%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	73.1%
2005	324	3,4,5,6	14.8%	0.0%	2.5%	2.5%	6.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.2%	67.9%
2006	286	3,4,5,6	12.6%	3.5%	1.7%	2.8%	5.6%	0.0%	0.0%	0.0%	0.0%	0.0%	4.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.2%	63.6%
2007	511	3,4,5,6	11.4%	0.4%	2.7%	1.6%	8.4%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	72.4%
2008	484	3,4,5,6	6.0%	0.2%	1.7%	2.3%	13.4%	0.0%	0.0%	0.0%	0.0%	0.0%	11.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.8%	53.1%
2009	651	3,4,5,6	10.4%	1.8%	4.3%	1.1%	6.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	74.2%
2010	971	4,5,6	5.0%	0.3%	4.0%	2.1%	10.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.9%	73.6%
1979-2010	466		13.0%	0.4%	3.5%	4.5%	5.1%	0.0%	0.0%	0.0%	0.0%	0.0%	9.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	60.4%
1979-1984	65		50.8%	0.0%	0.0%	18.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	30.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	336		13.0%	0.2%	2.1%	7.6%	3.2%	0.0%	0.0%	0.0%	0.0%	0.1%	15.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.7%	56.0%
1996-1998	535		9.2%	0.1%	5.6%	0.0%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	8.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%	69.8%
1999-2010	601		10.7%	0.7%	4.6%	1.7%	7.9%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.6%	67.0%

Appendix C.30. Percent distribution of Kitsumkalum River Summer (North/Central BC) total fishing mortalities among fisheries and escapement.

	Estimated		AABM							ISBM														
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	8	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	28	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	82	3,4,5	56.1%	0.0%	0.0%	19.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	24.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	195	4,5,6	29.2%	0.0%	1.5%	7.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	48.7%
1986	216	3,5,6	10.2%	0.0%	0.0%	13.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	64.8%
1987	264	3,4,6	12.9%	0.0%	2.7%	9.5%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	62.5%
1988	202	3,4,5	24.3%	1.5%	5.0%	6.4%	4.0%	0.0%	0.0%	0.0%	0.0%	0.0%	18.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%	37.1%
1989	851	3,4,5,6	14.0%	0.8%	6.9%	5.3%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%	10.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.4%	55.6%
1990	635	3,4,5,6	11.7%	0.0%	3.3%	7.6%	2.0%	0.0%	0.0%	0.0%	0.0%	0.3%	6.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.5%	61.9%
1991	334	3,4,5,6	19.5%	0.0%	4.2%	10.5%	6.6%	0.0%	0.0%	0.0%	0.0%	0.9%	15.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.6%	36.8%
1992	693	3,4,5,6	15.3%	0.0%	2.0%	7.6%	5.6%	0.4%	0.0%	0.0%	0.0%	0.0%	9.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	58.6%
1993	241	3,4,5,6	11.6%	1.7%	2.1%	11.2%	4.6%	0.0%	0.0%	0.0%	0.0%	0.0%	17.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	51.0%
1994	132	3,4,5,6	13.6%	0.0%	0.0%	6.8%	6.1%	0.0%	0.0%	0.0%	0.0%	0.0%	18.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	55.3%
1995	215	3,4,5,6	13.5%	0.0%	2.8%	8.4%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	31.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.2%	36.3%
1996	547	3,4,5,6	10.2%	0.2%	6.8%	0.4%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	19.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	58.9%
1997	657	3,4,5,6	12.0%	0.0%	8.8%	0.0%	6.7%	0.0%	0.0%	0.0%	0.0%	0.0%	7.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	59.5%
1998	509	3,4,5,6	10.4%	0.0%	3.5%	0.0%	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%	78.6%
1999	770	3,4,5,6	15.6%	0.0%	9.7%	0.0%	12.2%	0.0%	0.0%	0.0%	0.0%	0.0%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	58.3%
2000	367	3,4,5,6	9.5%	0.0%	10.1%	0.0%	9.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%	60.5%
2001	629	3,4,5,6	11.0%	0.0%	9.2%	0.6%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	18.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	52.6%
2002	1037	3,4,5,6	14.6%	0.4%	6.2%	1.6%	13.1%	0.0%	0.0%	0.0%	0.6%	0.0%	6.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	55.4%
2003	641	3,4,5,6	15.6%	0.0%	1.9%	5.8%	7.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%	65.8%
2004	984	3,4,5,6	8.3%	3.4%	5.6%	0.9%	11.4%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	67.2%
2005	347	3,4,5,6	17.0%	0.0%	2.9%	2.6%	8.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.1%	63.4%
2006	307	3,4,5,6	14.3%	3.9%	2.3%	2.9%	7.2%	0.0%	0.0%	0.0%	0.0%	0.0%	4.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.2%	59.3%
2007	556	3,4,5,6	12.9%	0.9%	3.2%	1.6%	10.1%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	66.5%
2008	533	3,4,5,6	6.8%	0.4%	2.1%	2.6%	17.3%	0.0%	0.0%	0.0%	0.0%	0.0%	11.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.4%	48.2%
2009	709	3,4,5,6	12.8%	2.4%	5.6%	1.3%	7.8%	0.4%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	68.1%
2010	1010	4,5,6	5.2%	0.4%	4.1%	2.1%	12.3%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.1%	70.8%
1979-2010	506		15.1%	0.6%	4.2%	5.1%	6.3%	0.0%	0.0%	0.0%	0.0%	0.0%	9.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	55.6%
1979-1984	82		56.1%	0.0%	0.0%	19.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	24.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	362		16.0%	0.4%	2.8%	8.6%	3.5%	0.0%	0.0%	0.0%	0.0%	0.1%	14.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.7%	51.7%
1996-1998	571		10.9%	0.1%	6.4%	0.1%	3.6%	0.0%	0.0%	0.0%	0.0%	0.0%	9.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%	65.7%
1999-2010	658		12.0%	1.0%	5.2%	1.8%	10.1%	0.0%	0.0%	0.0%	0.0%	0.0%	4.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%	61.4%

Appendix C.31. Percent distribution of Lower River Hatchery Tule (Lower Bonneville Hatchery) reported catch among fisheries and escapement.

	Estimated		AABM							ISBM												
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	129	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	396	2,3,4	0.8%	0.0%	0.0%	0.0%	0.0%	16.7%	1.3%	0.0%	3.3%	0.5%	7.6%	0.0%	18.7%	1.0%	12.1%	3.0%	10.1%	0.0%	5.6%	0.0%	19.4%
1981	2765	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	31.0%	0.3%	0.0%	1.8%	0.5%	2.5%	0.0%	21.5%	0.0%	8.1%	0.5%	3.4%	0.0%	1.4%	0.3%	28.6%
1982	3176	2,3,4,5	0.0%	0.0%	0.0%	0.3%	0.0%	26.1%	0.5%	0.0%	0.9%	1.8%	0.3%	0.0%	18.6%	0.2%	7.6%	1.9%	1.3%	0.0%	14.1%	0.1%	26.5%
1983	1793	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.1%	34.6%	0.4%	0.0%	1.4%	2.3%	0.8%	0.0%	11.3%	0.0%	4.4%	1.3%	4.2%	0.0%	5.5%	0.0%	33.6%
1984	1465	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	50.1%	0.3%	0.5%	0.8%	3.2%	1.6%	0.0%	5.9%	0.0%	1.2%	0.7%	1.0%	0.0%	10.7%	1.6%	22.5%
1985	995	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	28.0%	0.7%	0.0%	1.1%	0.9%	1.6%	0.0%	15.7%	0.3%	3.8%	1.3%	1.3%	0.0%	2.5%	0.6%	42.1%
1986	1341	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.1%	9.4%	2.7%	0.0%	2.5%	0.0%	8.1%	0.0%	6.9%	0.0%	2.2%	1.4%	3.4%	0.0%	9.8%	5.9%	47.7%
1987	7478	2,3,4,5	0.0%	0.0%	0.0%	0.2%	0.0%	26.9%	2.5%	0.0%	0.5%	1.6%	0.2%	0.0%	16.6%	0.5%	4.0%	0.7%	1.5%	0.0%	19.4%	4.0%	21.3%
1988	2511	2,3,4,5	0.3%	0.0%	0.0%	0.3%	0.0%	29.0%	2.4%	0.0%	1.0%	0.6%	0.0%	0.0%	11.5%	0.5%	0.9%	0.3%	0.5%	0.0%	23.6%	1.8%	27.3%
1989	254	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	15.4%	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	22.4%	0.0%	2.4%	0.0%	2.0%	0.0%	5.9%	0.8%	49.2%
1990	288	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	19.8%	0.0%	0.0%	0.0%	0.0%	2.1%	0.0%	16.3%	0.0%	6.9%	0.0%	1.4%	0.0%	0.3%	2.8%	50.3%
1991	442	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	2.3%	0.0%	0.7%	0.2%	2.5%	0.0%	9.3%	0.0%	4.3%	0.2%	1.1%	0.0%	2.0%	9.5%	57.9%
1992	1150	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	16.3%	1.9%	0.0%	0.0%	0.5%	1.0%	0.0%	28.0%	0.0%	5.4%	0.0%	1.9%	0.0%	0.8%	3.7%	40.5%
1993	486	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	18.5%	4.5%	0.0%	0.0%	0.6%	0.0%	0.0%	19.8%	0.0%	2.5%	0.0%	4.1%	0.0%	2.1%	4.3%	43.6%
1994	29	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	27.6%	0.0%	0.0%	10.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	62.1%
1995	30	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%	10.0%	86.7%
1996	62	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.1%	0.0%	0.0%	0.0%	0.0%	0.0%	6.5%	0.0%	85.5%
1997	209	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	17.2%	3.8%	0.0%	2.9%	0.0%	0.0%	0.0%	8.6%	0.0%	2.9%	0.0%	0.0%	0.0%	1.0%	8.6%	55.0%
1998	104	2,3,4,5	0.0%	0.0%	0.0%	0.0%	3.8%	1.0%	9.6%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	1.0%	0.0%	0.0%	0.0%	1.9%	21.2%	60.6%
1999	307	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	9.1%	0.0%	0.0%	0.0%	0.0%	0.0%	6.8%	0.0%	3.3%	0.0%	0.0%	0.0%	3.6%	6.2%	68.7%
2000	222	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	17.6%	12.2%	0.0%	1.8%	0.0%	0.0%	0.0%	2.3%	0.0%	0.0%	0.0%	0.9%	0.0%	2.7%	3.6%	59.0%
2001	1064	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	8.2%	2.3%	0.0%	0.3%	0.0%	0.0%	0.0%	19.3%	0.0%	3.6%	0.1%	0.3%	0.0%	1.4%	4.8%	59.8%
2002	1658	2,3,4,5	0.4%	0.0%	0.0%	0.0%	0.0%	10.6%	3.1%	0.0%	0.0%	0.0%	0.0%	0.0%	20.7%	0.0%	7.8%	0.1%	0.0%	0.0%	8.5%	3.1%	45.7%
2003	1699	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	16.2%	5.7%	0.0%	0.4%	0.0%	0.0%	0.0%	15.2%	0.0%	7.0%	0.0%	0.7%	0.0%	7.2%	2.3%	45.3%
2004	1446	2,3,4,5	0.5%	0.0%	0.0%	0.3%	0.3%	23.0%	8.6%	0.0%	0.5%	0.0%	0.0%	0.0%	8.5%	0.0%	3.7%	0.0%	0.1%	0.0%	16.9%	1.2%	36.4%
2005	558	2,3,4,5	0.0%	0.0%	0.0%	0.4%	0.0%	31.5%	7.2%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	0.0%	2.3%	0.0%	0.0%	0.0%	17.7%	0.2%	33.7%
2006	82	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	17.1%	14.6%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	9.8%	1.2%	54.9%
2007	144	2,3,4,5	0.0%	0.7%	0.0%	0.0%	0.0%	14.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.3%	0.0%	2.8%	0.0%	0.0%	0.0%	4.9%	2.8%	68.1%
2008	348	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	11.8%	9.5%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	7.2%	0.0%	0.0%	0.0%	25.0%	3.4%	38.8%
2009	477	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.4%	9.9%	0.0%	2.3%	0.0%	0.0%	0.0%	4.0%	0.0%	5.0%	0.0%	4.4%	0.0%	33.5%	3.1%	33.3%
2010	1326	2,3,4,5	0.2%	0.0%	0.0%	0.2%	1.4%	7.3%	5.9%	0.0%	0.5%	0.0%	0.0%	0.0%	17.5%	0.3%	5.7%	0.0%	0.3%	0.0%	32.1%	3.6%	24.9%
1979-2010	1107		0.1%	0.0%	0.0%	0.1%	0.2%	17.5%	3.9%	0.0%	1.1%	0.4%	1.0%	0.0%	11.4%	0.1%	3.8%	0.4%	1.4%	0.0%	9.0%	3.6%	46.1%
1979-1984	1919		0.2%	0.0%	0.0%	0.1%	0.0%	31.7%	0.6%	0.1%	1.6%	1.7%	2.6%	0.0%	15.2%	0.2%	6.7%	1.5%	4.0%	0.0%	7.5%	0.4%	26.1%
1985-1995	1364		0.0%	0.0%	0.0%	0.0%	0.0%	18.3%	1.5%	0.0%	1.5%	0.4%	1.6%	0.0%	13.3%	0.1%	2.9%	0.4%	1.6%	0.0%	6.3%	3.9%	48.1%
1996-1998	125		0.0%	0.0%	0.0%	0.0%	1.3%	6.1%	4.5%	0.0%	1.0%	0.0%	0.0%	0.0%	5.9%	0.0%	1.3%	0.0%	0.0%	0.0%	3.1%	9.9%	67.0%
1999-2010	778		0.1%	0.1%	0.0%	0.1%	0.1%	13.7%	7.3%	0.0%	0.5%	0.0%	0.0%	0.0%	9.5%	0.0%	4.0%	0.0%	0.6%	0.0%	13.6%	3.0%	47.4%

Appendix C.32. Percent distribution of Lower River Hatchery Tule (Lower Bonneville Hatchery) total fishing mortalities among fisheries and escapement.

			AABM							ISBM													
Catch	Estimated # of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	163	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	676	2,3,4	0.4%	0.0%	0.0%	0.1%	0.0%	29.1%	1.0%	0.0%	2.1%	0.7%	5.3%	0.0%	23.7%	0.7%	9.0%	2.8%	9.6%	0.0%	3.8%	0.0%	11.4%
1981	3211	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	31.9%	0.3%	0.0%	1.7%	0.5%	2.3%	0.0%	24.8%	0.0%	8.0%	0.6%	3.7%	0.0%	1.2%	0.2%	24.6%
1982	3573	2,3,4,5	0.0%	0.0%	0.0%	0.3%	0.0%	27.2%	0.5%	0.0%	0.8%	1.9%	0.3%	0.0%	20.7%	0.2%	7.6%	2.2%	1.5%	0.0%	13.2%	0.1%	23.6%
1983	2040	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.1%	36.5%	0.4%	0.0%	1.4%	2.5%	0.8%	0.0%	12.4%	0.0%	4.4%	1.6%	5.3%	0.0%	5.2%	0.0%	29.6%
1984	1636	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	51.7%	0.2%	0.5%	0.8%	3.4%	1.5%	0.0%	6.2%	0.0%	1.2%	0.9%	1.4%	0.0%	10.6%	1.5%	20.2%
1985	1103	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	30.0%	0.7%	0.0%	1.1%	0.9%	1.5%	0.0%	17.8%	0.3%	3.8%	1.4%	1.5%	0.0%	2.4%	0.5%	38.0%
1986	1925	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.2%	8.7%	2.4%	0.0%	2.1%	0.0%	6.7%	0.0%	6.2%	0.0%	1.9%	1.9%	21.5%	0.0%	10.9%	4.3%	33.2%
1987	8960	2,3,4,5	0.0%	0.0%	0.0%	0.2%	0.0%	32.5%	2.3%	0.0%	0.4%	1.9%	0.2%	0.0%	17.5%	0.5%	3.7%	0.6%	1.5%	0.0%	17.5%	3.5%	17.8%
1988	2676	2,3,4,5	0.3%	0.0%	0.0%	0.3%	0.0%	31.4%	2.4%	0.0%	1.0%	0.6%	0.0%	0.0%	11.8%	0.5%	0.9%	0.3%	0.5%	0.0%	22.5%	1.8%	25.6%
1989	277	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	17.0%	0.0%	0.0%	0.0%	0.0%	1.8%	0.0%	25.3%	0.0%	2.2%	0.0%	2.5%	0.0%	5.4%	0.7%	45.1%
1990	323	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	22.9%	0.0%	0.0%	0.0%	0.0%	1.9%	0.0%	18.3%	0.0%	7.1%	0.0%	1.9%	0.0%	0.3%	2.8%	44.9%
1991	515	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	11.7%	2.3%	0.0%	2.5%	0.2%	2.3%	0.0%	10.7%	0.0%	4.7%	0.4%	2.7%	0.0%	2.5%	10.3%	49.7%
1992	1326	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	19.5%	1.8%	0.0%	0.0%	0.6%	0.8%	0.0%	30.5%	0.0%	5.2%	0.0%	2.0%	0.0%	0.8%	3.5%	35.1%
1993	531	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	20.9%	4.3%	0.0%	0.0%	0.8%	0.0%	0.0%	20.9%	0.0%	2.4%	0.0%	4.5%	0.0%	1.9%	4.3%	39.9%
1994	31	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	29.0%	0.0%	0.0%	12.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	58.1%
1995	31	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	12.9%	83.9%
1996	66	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.6%	0.0%	0.0%	0.0%	0.0%	0.0%	7.6%	0.0%	80.3%
1997	225	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	21.3%	3.6%	0.0%	3.1%	0.0%	0.0%	0.0%	8.0%	0.0%	3.1%	0.0%	0.0%	0.0%	0.9%	8.9%	51.1%
1998	115	2,3,4,5	0.0%	0.0%	0.0%	0.0%	7.0%	0.9%	10.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	1.7%	0.0%	0.0%	0.0%	1.7%	22.6%	54.8%
1999	319	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	9.7%	0.0%	0.0%	0.0%	0.0%	0.0%	8.2%	0.0%	3.4%	0.0%	0.0%	0.0%	3.8%	6.6%	66.1%
2000	253	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	17.8%	13.8%	0.0%	5.1%	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%	2.8%	0.0%	2.8%	3.6%	51.8%
2001	1154	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	8.3%	2.7%	0.0%	0.5%	0.0%	0.0%	0.0%	22.3%	0.0%	3.8%	0.1%	0.7%	0.0%	1.5%	5.0%	55.1%
2002	1808	2,3,4,5	0.5%	0.0%	0.0%	0.0%	0.0%	10.7%	3.5%	0.0%	0.0%	0.0%	0.0%	0.0%	23.6%	0.0%	8.2%	0.1%	0.0%	0.0%	8.4%	3.1%	41.9%
2003	1825	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	15.7%	7.0%	0.0%	0.5%	0.0%	0.0%	0.0%	17.2%	0.0%	7.2%	0.0%	0.8%	0.0%	7.1%	2.3%	42.2%
2004	1510	2,3,4,5	0.5%	0.0%	0.0%	0.3%	0.4%	22.6%	9.7%	0.0%	0.5%	0.0%	0.0%	0.0%	9.1%	0.0%	3.8%	0.0%	0.1%	0.0%	16.6%	1.3%	34.9%
2005	581	2,3,4,5	0.0%	0.0%	0.0%	0.3%	0.0%	31.3%	8.3%	0.0%	0.0%	0.0%	0.0%	0.0%	7.6%	0.0%	2.4%	0.0%	0.0%	0.0%	17.6%	0.2%	32.4%
2006	87	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	17.2%	17.2%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	10.3%	1.1%	51.7%
2007	154	2,3,4,5	0.0%	1.3%	0.0%	0.0%	0.0%	16.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.1%	0.0%	2.6%	0.0%	0.0%	0.0%	5.8%	3.2%	63.6%
2008	379	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	11.9%	10.6%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	0.0%	7.4%	0.0%	0.0%	0.0%	25.9%	3.7%	35.6%
2009	607	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%	9.9%	0.0%	5.9%	0.0%	0.0%	0.0%	4.0%	0.0%	4.8%	0.0%	9.7%	0.0%	32.6%	3.0%	26.2%
2010	1504	2,3,4,5	0.3%	0.0%	0.0%	0.3%	1.7%	7.0%	6.9%	0.0%	0.8%	0.0%	0.0%	0.0%	19.5%	0.3%	5.7%	0.0%	0.4%	0.0%	31.5%	3.6%	21.9%
1979-2010	1272		0.1%	0.0%	0.0%	0.1%	0.3%	19.1%	4.3%	0.0%	1.4%	0.4%	0.8%	0.0%	12.6%	0.1%	3.8%	0.4%	2.4%	0.0%	8.9%	3.7%	41.6%
1979-1984	2227		0.1%	0.0%	0.0%	0.1%	0.0%	35.3%	0.5%	0.1%	1.3%	1.8%	2.1%	0.0%	17.5%	0.2%	6.1%	1.6%	4.3%	0.0%	6.8%	0.4%	21.9%
1985-1995	1609		0.0%	0.0%	0.0%	0.0%	0.0%	20.3%	1.5%	0.0%	1.8%	0.4%	1.4%	0.0%	14.4%	0.1%	2.9%	0.4%	3.5%	0.0%	6.1%	4.1%	42.9%
1996-1998	135		0.0%	0.0%	0.0%	0.0%	2.3%	8.9%	4.7%	0.0%	1.0%	0.0%	0.0%	0.0%	5.5%	0.0%	1.6%	0.0%	0.0%	0.0%	3.4%	10.5%	62.1%
1999-2010	848		0.1%	0.1%	0.0%	0.1%	0.2%	13.7%	8.3%	0.0%	1.1%	0.0%	0.0%	0.0%	10.7%	0.0%	4.1%	0.0%	1.2%	0.0%	13.6%	3.1%	43.6%

Appendix C.33. Percent distribution of Lewis River Wild (Lewis River Wild) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	148	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	262	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	1125	2,3,4	6.4%	0.0%	0.0%	3.3%	2.1%	6.0%	0.0%	0.0%	0.0%	1.4%	0.9%	0.0%	2.1%	0.0%	2.6%	0.1%	0.2%	0.0%	4.1%	13.2%	57.7%
1982	922	3,4,5	6.1%	1.0%	0.2%	3.0%	0.0%	10.7%	0.0%	0.4%	0.0%	1.4%	1.5%	0.0%	4.1%	0.9%	7.5%	0.7%	0.8%	0.0%	4.7%	15.3%	41.8%
1983	1020	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	348	2,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	307	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	635	2,3,4	4.9%	0.0%	0.0%	1.6%	0.0%	6.8%	2.5%	0.0%	0.0%	2.2%	0.9%	0.0%	3.3%	0.0%	0.6%	0.0%	0.0%	0.0%	26.6%	11.5%	39.1%
1987	1099	2,3,4,5	4.1%	0.0%	0.0%	4.7%	0.0%	8.4%	0.9%	0.0%	0.0%	1.3%	0.0%	0.0%	2.7%	0.4%	0.9%	0.0%	0.3%	0.0%	25.3%	5.1%	46.0%
1988	923	2,3,4,5	4.4%	0.0%	0.0%	2.9%	0.0%	8.9%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	4.6%	0.0%	1.1%	0.0%	1.1%	0.0%	23.1%	14.5%	38.8%
1989	1280	2,3,4,5	1.8%	0.2%	0.2%	4.5%	0.5%	5.1%	0.5%	0.0%	0.0%	0.2%	1.5%	0.0%	4.9%	0.2%	0.7%	0.0%	0.0%	0.0%	9.2%	6.6%	63.9%
1990	1138	2,3,4,5	5.4%	0.0%	0.0%	1.7%	0.6%	12.1%	0.8%	0.0%	0.0%	0.4%	0.6%	0.0%	4.0%	0.0%	1.8%	0.0%	1.1%	0.0%	3.3%	2.2%	65.8%
1991	884	2,3,4,5	6.0%	0.1%	0.0%	3.8%	1.1%	5.9%	0.0%	0.0%	0.0%	0.5%	0.7%	0.0%	2.4%	0.0%	1.1%	0.0%	0.0%	0.0%	15.8%	6.0%	56.6%
1992	552	2,3,4,5	1.6%	0.0%	0.0%	3.8%	0.7%	6.2%	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%	2.9%	0.0%	0.7%	0.0%	0.9%	0.0%	4.5%	21.7%	55.1%
1993	384	2,3,4,5	3.6%	0.0%	1.0%	4.9%	0.0%	7.6%	0.0%	0.0%	0.0%	0.0%	1.8%	0.0%	0.8%	0.0%	0.5%	0.0%	0.0%	0.0%	6.8%	8.6%	64.3%
1994	250	2,3,4,5	6.4%	0.0%	0.0%	3.2%	0.0%	3.2%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	83.2%
1995	527	2,3,4,5	6.5%	0.0%	2.3%	3.2%	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	24.7%	57.7%
1996	324	2,3,4,5	7.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	4.6%	84.0%
1997	222	3,4,5	12.6%	0.0%	0.0%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	81.1%
1998	101	2,4,5	7.9%	0.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	2.0%	83.2%
1999	53	2,3,5	11.3%	0.0%	0.0%	9.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	79.2%
2000	67	2,3,4	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.4%	3.0%	77.6%
2001	223	2,3,4,5	4.9%	0.0%	1.3%	0.0%	0.0%	8.5%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	5.8%	0.0%	2.2%	0.0%	0.0%	0.0%	2.2%	3.1%	69.1%
2002	361	2,3,4,5	11.4%	0.0%	1.7%	0.0%	0.0%	6.1%	5.3%	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	0.0%	2.2%	0.0%	0.0%	0.0%	4.7%	2.5%	60.9%
2003	459	2,3,4,5	9.4%	0.0%	0.0%	1.5%	1.1%	5.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	9.4%	0.0%	1.1%	0.0%	0.0%	0.0%	6.8%	5.9%	58.8%
2004	2145	2,3,4,5	6.0%	0.0%	0.5%	3.0%	0.7%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.1%	0.0%	0.0%	0.0%	2.5%	1.9%	82.6%
2005	373	2,3,4,5	3.5%	0.0%	0.0%	12.1%	6.2%	4.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	0.8%	0.0%	0.0%	0.0%	12.1%	8.8%	50.7%
2006	574	2,3,4,5	13.6%	0.0%	0.5%	6.4%	1.6%	8.5%	0.9%	0.0%	1.7%	0.0%	0.0%	0.0%	1.6%	0.0%	0.5%	0.0%	0.0%	0.0%	5.7%	19.0%	39.9%
2007	189	2,3,4,5	32.8%	0.0%	1.1%	6.3%	0.0%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.9%	0.0%	3.2%	0.0%	0.0%	0.0%	3.2%	0.0%	44.4%
2008	135	2,3,4,5	6.7%	0.0%	0.0%	0.0%	4.4%	13.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.2%	0.0%	0.7%	0.0%	3.7%	0.0%	0.0%	5.2%	60.7%
2009	167	2,3,4,5	18.0%	0.0%	0.0%	3.6%	3.6%	6.6%	18.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.6%	3.6%	44.9%
2010	172	3,4,5	7.0%	0.0%	0.0%	5.2%	2.3%	1.7%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	4.7%	0.0%	4.7%	0.0%	0.0%	0.0%	0.0%	2.3%	70.3%
1979-2010	566		7.9%	0.0%	0.3%	3.6%	0.9%	5.3%	1.3%	0.0%	0.1%	0.3%	0.4%	0.0%	2.8%	0.1%	1.3%	0.0%	0.3%	0.0%	6.7%	7.2%	61.4%
1979-1984	1024		6.2%	0.5%	0.1%	3.2%	1.1%	8.3%	0.0%	0.2%	0.0%	1.4%	1.2%	0.0%	3.1%	0.4%	5.0%	0.4%	0.5%	0.0%	4.4%	14.2%	49.7%
1985-1995	767		4.5%	0.0%	0.4%	3.4%	0.3%	6.9%	0.5%	0.0%	0.0%	0.6%	0.8%	0.0%	2.6%	0.1%	0.8%	0.0%	0.3%	0.0%	11.6%	10.1%	57.0%
1996-1998	216		9.4%	0.0%	0.0%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	3.3%	82.7%
1999-2010	410		10.6%	0.0%	0.4%	4.0%	1.7%	4.9%	2.5%	0.0%	0.1%	0.0%	0.0%	0.0%	3.4%	0.0%	1.4%	0.0%	0.3%	0.0%	4.5%	4.6%	61.6%

Appendix C.34. Percent distribution of Lewis River Wild (Lewis River Wild) total fishing mortalities among fisheries and escapement.

	Estimated		AABM							ISBM													
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	193	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	302	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	1208	2,3,4	7.5%	0.0%	0.0%	3.6%	2.2%	7.0%	0.0%	0.0%	0.0%	1.6%	1.0%	0.0%	2.6%	0.0%	2.9%	0.2%	0.2%	0.0%	4.8%	12.7%	53.7%
1982	972	3,4,5	7.6%	0.9%	0.2%	3.3%	0.0%	11.1%	0.0%	0.4%	0.0%	1.5%	1.4%	0.0%	4.3%	0.8%	7.6%	0.6%	0.8%	0.0%	4.6%	15.0%	39.6%
1983	1081	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	377	2,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	381	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	694	2,3,4	6.1%	0.0%	0.0%	2.3%	0.0%	8.1%	2.6%	0.0%	0.0%	2.2%	1.0%	0.0%	3.7%	0.0%	0.6%	0.0%	0.0%	0.0%	26.8%	11.0%	35.7%
1987	1206	2,3,4,5	5.5%	0.0%	0.0%	5.1%	0.0%	9.2%	0.9%	0.0%	0.0%	1.4%	0.0%	0.0%	2.8%	0.4%	0.9%	0.0%	0.3%	0.0%	26.7%	4.8%	41.9%
1988	1030	2,3,4,5	5.1%	0.0%	0.0%	3.2%	0.0%	10.2%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	4.9%	0.0%	1.1%	0.0%	1.4%	0.0%	24.3%	14.6%	34.8%
1989	1357	2,3,4,5	2.4%	0.7%	0.3%	5.0%	0.4%	5.8%	0.5%	0.0%	0.0%	0.2%	1.5%	0.0%	5.4%	0.3%	0.7%	0.0%	0.0%	0.0%	9.6%	6.8%	60.3%
1990	1215	2,3,4,5	7.6%	0.0%	0.0%	1.9%	0.6%	13.3%	0.8%	0.0%	0.0%	0.5%	0.7%	0.0%	4.2%	0.0%	1.9%	0.0%	1.3%	0.0%	3.4%	2.2%	61.6%
1991	921	2,3,4,5	7.2%	0.2%	0.0%	4.1%	1.2%	6.4%	0.0%	0.0%	0.0%	0.4%	0.7%	0.0%	2.5%	0.0%	1.1%	0.0%	0.0%	0.0%	15.6%	6.3%	54.3%
1992	580	2,3,4,5	1.7%	0.0%	0.0%	4.1%	0.7%	6.7%	0.0%	0.0%	0.0%	1.9%	0.0%	0.0%	3.1%	0.0%	0.7%	0.0%	1.0%	0.0%	5.0%	22.6%	52.4%
1993	406	2,3,4,5	4.4%	0.0%	1.2%	5.7%	0.0%	8.4%	0.0%	0.0%	0.0%	0.0%	1.7%	0.0%	1.5%	0.0%	0.5%	0.0%	0.0%	0.0%	7.1%	8.6%	60.8%
1994	265	2,3,4,5	9.1%	0.0%	0.0%	4.9%	0.0%	3.8%	0.0%	0.0%	0.0%	0.0%	1.5%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	0.0%	78.5%
1995	553	2,3,4,5	7.6%	0.0%	2.4%	3.6%	0.0%	6.1%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	24.8%	55.0%
1996	332	2,3,4,5	9.0%	0.0%	0.0%	0.3%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	4.8%	81.9%
1997	226	3,4,5	14.2%	0.0%	0.0%	3.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	79.6%
1998	101	2,4,5	7.9%	0.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	2.0%	83.2%
1999	62	2,3,5	17.7%	0.0%	1.6%	8.1%	0.0%	1.6%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	67.7%
2000	73	2,3,4	6.8%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	15.1%	2.7%	71.2%
2001	238	2,3,4,5	5.9%	0.0%	1.7%	0.0%	0.0%	8.8%	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	6.3%	0.0%	2.9%	0.0%	0.0%	0.0%	2.5%	2.9%	64.7%
2002	394	2,3,4,5	14.5%	0.0%	1.8%	0.0%	0.0%	5.8%	5.8%	0.0%	0.0%	0.0%	0.0%	0.0%	6.6%	0.0%	2.3%	0.0%	0.0%	0.0%	4.8%	2.5%	55.8%
2003	478	2,3,4,5	10.5%	0.0%	0.0%	1.7%	1.3%	5.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	10.3%	0.0%	1.0%	0.0%	0.0%	0.0%	6.7%	5.9%	56.5%
2004	2182	2,3,4,5	6.6%	0.0%	0.5%	3.3%	1.0%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.1%	0.0%	0.0%	0.0%	2.5%	1.9%	81.2%
2005	394	2,3,4,5	4.1%	0.0%	0.0%	12.9%	7.6%	4.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	0.0%	0.8%	0.0%	0.0%	0.0%	11.7%	8.9%	48.0%
2006	594	2,3,4,5	14.5%	0.0%	0.5%	6.6%	1.9%	8.4%	1.0%	0.0%	1.9%	0.0%	0.0%	0.0%	1.5%	0.0%	0.5%	0.0%	0.0%	0.0%	5.6%	19.2%	38.6%
2007	209	2,3,4,5	37.3%	0.0%	1.0%	6.7%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.2%	0.0%	2.9%	0.0%	0.0%	0.0%	2.9%	0.0%	40.2%
2008	141	2,3,4,5	7.8%	0.0%	0.0%	0.0%	5.0%	12.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.7%	0.0%	0.7%	0.0%	5.0%	0.0%	0.0%	5.0%	58.2%
2009	179	2,3,4,5	20.1%	0.0%	0.0%	3.4%	3.9%	6.1%	19.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.0%	0.6%	3.4%	41.9%
2010	176	3,4,5	7.4%	0.0%	0.0%	5.1%	2.8%	1.7%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	4.5%	0.0%	5.1%	0.0%	0.0%	0.0%	0.0%	2.3%	68.8%
1979-2010	599		9.5%	0.1%	0.5%	3.8%	1.1%	5.7%	1.5%	0.0%	0.1%	0.4%	0.4%	0.0%	3.2%	0.1%	1.3%	0.0%	0.4%	0.0%	6.8%	7.2%	58.0%
1979-1984	1090		7.6%	0.5%	0.1%	3.5%	1.1%	9.1%	0.0%	0.2%	0.0%	1.6%	1.2%	0.0%	3.4%	0.4%	5.3%	0.4%	0.5%	0.0%	4.7%	13.8%	46.7%
1985-1995	823		5.7%	0.1%	0.4%	4.0%	0.3%	7.8%	0.5%	0.0%	0.0%	0.7%	0.8%	0.0%	2.9%	0.1%	0.7%	0.0%	0.4%	0.0%	12.0%	10.2%	53.5%
1996-1998	220		10.4%	0.0%	0.0%	2.8%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	3.3%	81.6%
1999-2010	427		12.8%	0.0%	0.7%	4.0%	1.9%	4.9%	3.0%	0.0%	0.2%	0.0%	0.0%	0.0%	4.1%	0.0%	1.5%	0.0%	0.4%	0.0%	4.4%	4.6%	57.7%

Appendix C.35. Percent distribution of Lyons Ferry (Lyons Ferry Hatchery) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	214	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	759	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	797	2,3,4	2.8%	0.0%	0.0%	3.3%	0.0%	18.7%	0.0%	0.0%	0.0%	0.6%	1.0%	0.0%	10.5%	0.0%	0.3%	0.0%	0.0%	0.0%	29.7%	3.6%	29.5%
1989	683	2,3,4,5	2.8%	0.0%	0.0%	6.3%	0.0%	16.0%	0.9%	0.0%	0.0%	0.0%	1.6%	0.0%	12.3%	0.0%	3.4%	0.0%	0.0%	0.0%	27.2%	3.1%	26.5%
1990	622	2,3,4,5	5.3%	0.0%	0.0%	3.5%	0.0%	16.1%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	9.6%	0.0%	3.4%	0.0%	1.4%	0.0%	26.4%	1.0%	32.8%
1991	225	2,3,4,5	2.7%	0.0%	1.8%	4.9%	0.0%	8.9%	0.0%	0.0%	0.0%	0.0%	1.3%	0.0%	4.0%	0.0%	1.3%	0.0%	0.0%	0.0%	12.9%	1.3%	60.9%
1992	171	2,3,4,5	1.2%	2.3%	0.0%	3.5%	0.0%	10.5%	2.9%	0.0%	0.0%	0.0%	2.3%	0.0%	5.8%	0.0%	0.0%	0.0%	0.0%	0.0%	8.2%	1.8%	61.4%
1993	252	3,4,5	3.6%	0.0%	0.0%	4.4%	0.0%	10.3%	0.0%	0.0%	0.0%	0.8%	2.0%	0.0%	7.9%	0.0%	1.6%	0.0%	0.0%	0.0%	13.9%	0.0%	55.6%
1994	630	2,4,5	5.7%	0.6%	1.3%	5.6%	0.0%	6.5%	0.0%	0.0%	0.6%	0.6%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.6%	0.5%	61.4%
1995	806	3,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	583	2,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	78	3,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1998	154	4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1999	120	5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2000	704	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	1335	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	1348	2,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	398	2,3,5	6.8%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	0.0%	1.3%	0.0%	0.0%	0.0%	11.3%	3.5%	71.1%
2004	787	2,3,4	2.4%	0.0%	0.0%	1.4%	1.4%	1.7%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	0.0%	1.8%	0.0%	0.0%	0.0%	4.6%	2.5%	77.8%
2005	464	2,3,4,5	3.2%	0.2%	0.0%	3.0%	1.3%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.4%	0.0%	2.4%	0.0%	1.5%	0.0%	12.3%	0.9%	68.1%
2006	313	2,3,4,5	4.8%	0.0%	0.0%	0.6%	3.2%	1.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	0.0%	1.6%	0.0%	0.0%	0.0%	8.6%	1.3%	70.3%
2007	2375	2,3,4,5	0.1%	0.0%	0.0%	0.1%	0.3%	1.2%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.7%	0.0%	0.1%	0.0%	2.5%	2.2%	92.6%
2008	4300	2,3,4,5	0.3%	0.0%	0.0%	0.3%	0.4%	6.2%	2.5%	0.0%	0.1%	0.0%	0.0%	0.0%	4.0%	0.0%	2.3%	0.0%	0.1%	0.0%	8.0%	2.1%	73.7%
2009	5691	2,3,4,5	1.1%	0.0%	0.1%	0.9%	0.1%	1.0%	1.7%	0.0%	0.1%	0.0%	0.0%	0.0%	1.4%	0.0%	0.8%	0.0%	0.1%	0.0%	8.3%	2.3%	82.1%
2010	3181	2,3,4,5	0.6%	0.1%	0.0%	1.0%	0.2%	4.7%	3.9%	0.0%	0.0%	0.0%	0.0%	0.0%	8.9%	0.0%	7.3%	0.0%	0.4%	0.0%	16.9%	2.1%	54.0%
1979-2010	1393		2.9%	0.2%	0.2%	2.6%	0.5%	7.2%	1.0%	0.0%	0.1%	0.1%	0.8%	0.0%	5.7%	0.0%	1.9%	0.0%	0.2%	0.0%	13.7%	1.9%	61.2%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	483		3.4%	0.4%	0.4%	4.5%	0.0%	12.4%	0.5%	0.0%	0.1%	0.3%	1.6%	0.0%	7.2%	0.0%	1.4%	0.0%	0.2%	0.0%	19.0%	1.6%	46.9%
1996-1998	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1999-2010	2189		2.4%	0.0%	0.0%	0.9%	0.9%	2.5%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	4.4%	0.0%	2.3%	0.0%	0.3%	0.0%	9.1%	2.1%	73.7%

Appendix C.36. Percent distribution of Lyons Ferry (Lyons Ferry Hatchery) total fishing mortalities among fisheries and escapement.

	Estimated		AABM							ISBM												
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	331	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	877	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	880	2,3,4	3.2%	0.0%	0.1%	3.8%	0.0%	20.9%	0.0%	0.0%	0.0%	0.6%	0.9%	0.0%	11.4%	0.0%	0.5%	0.0%	0.0%	0.0%	28.5%	3.5%	26.7%
1989	760	2,3,4,5	3.8%	0.0%	0.0%	7.0%	0.0%	17.9%	0.9%	0.0%	0.0%	0.0%	1.4%	0.0%	12.9%	0.0%	3.3%	0.0%	0.0%	0.0%	25.9%	3.0%	23.8%
1990	654	2,3,4,5	5.5%	0.0%	0.0%	3.7%	0.0%	17.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	9.9%	0.0%	3.5%	0.0%	1.7%	0.0%	26.1%	0.9%	31.2%
1991	243	2,3,4,5	3.3%	0.0%	2.5%	5.3%	0.0%	9.9%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	4.5%	0.0%	1.6%	0.0%	0.0%	0.0%	14.0%	1.2%	56.4%
1992	223	2,3,4,5	1.3%	17.5%	0.0%	3.6%	0.0%	10.3%	2.7%	0.0%	0.0%	0.0%	2.2%	0.0%	5.4%	0.0%	0.0%	0.0%	0.0%	0.0%	8.1%	1.8%	47.1%
1993	277	3,4,5	5.4%	1.1%	0.4%	5.4%	0.0%	11.6%	0.0%	0.0%	0.0%	1.1%	1.8%	0.0%	7.9%	0.0%	1.4%	0.0%	0.0%	0.0%	13.4%	0.0%	50.5%
1994	676	2,4,5	6.2%	2.2%	1.2%	5.3%	0.0%	6.7%	0.0%	0.0%	0.7%	0.6%	3.1%	0.0%	0.4%	0.0%	0.0%	0.0%	0.1%	0.0%	15.5%	0.6%	57.2%
1995	827	3,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	600	2,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	82	3,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1998	156	4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1999	123	5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2000	796	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	1389	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	1383	2,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	428	2,3,5	7.7%	0.0%	0.0%	0.5%	0.2%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.1%	0.0%	1.4%	0.0%	0.2%	0.0%	12.9%	4.0%	66.1%
2004	821	2,3,4	2.7%	0.0%	0.0%	1.6%	1.9%	1.6%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	5.7%	0.0%	1.9%	0.0%	0.2%	0.0%	6.0%	2.6%	74.5%
2005	493	2,3,4,5	3.7%	0.2%	0.0%	3.4%	2.0%	3.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.9%	0.0%	2.4%	0.0%	2.2%	0.0%	13.4%	0.8%	64.1%
2006	331	2,3,4,5	5.7%	0.0%	0.0%	0.6%	4.2%	0.9%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	8.2%	0.0%	1.8%	0.0%	0.0%	0.0%	9.1%	1.2%	66.5%
2007	2592	2,3,4,5	0.2%	0.1%	0.0%	0.2%	0.7%	1.7%	0.0%	0.0%	0.7%	0.0%	0.1%	0.0%	0.1%	0.0%	0.9%	0.0%	0.7%	0.0%	5.4%	4.4%	84.8%
2008	4447	2,3,4,5	0.7%	0.0%	0.0%	0.3%	0.5%	6.2%	2.8%	0.0%	0.2%	0.0%	0.0%	0.0%	4.8%	0.0%	2.5%	0.0%	0.1%	0.0%	8.5%	2.2%	71.2%
2009	6040	2,3,4,5	1.3%	0.0%	0.2%	1.0%	0.2%	1.1%	2.0%	0.0%	0.3%	0.0%	0.0%	0.0%	1.5%	0.0%	0.9%	0.0%	0.3%	0.0%	11.0%	2.7%	77.4%
2010	3408	2,3,4,5	0.9%	0.1%	0.0%	1.3%	0.2%	4.5%	4.6%	0.0%	0.0%	0.0%	0.0%	0.0%	10.2%	0.0%	7.5%	0.0%	0.5%	0.0%	17.5%	2.3%	50.4%
1979-2010	1485		3.4%	1.4%	0.3%	2.9%	0.7%	7.7%	1.1%	0.0%	0.1%	0.1%	0.8%	0.0%	6.2%	0.0%	2.0%	0.0%	0.4%	0.0%	14.3%	2.1%	56.5%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	530		4.1%	3.0%	0.6%	4.9%	0.0%	13.5%	0.5%	0.0%	0.1%	0.3%	1.6%	0.0%	7.5%	0.0%	1.5%	0.0%	0.3%	0.0%	18.8%	1.6%	41.9%
1996-1998	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1999-2010	2320		2.9%	0.1%	0.0%	1.1%	1.3%	2.6%	1.6%	0.0%	0.2%	0.0%	0.0%	0.0%	5.1%	0.0%	2.4%	0.0%	0.5%	0.0%	10.5%	2.5%	69.4%

Appendix C.37. Percent distribution of Lyons Ferry Yearling reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM														Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal				
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	89	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	385	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	1486	2,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	1567	2,3,5	0.3%	0.1%	0.0%	1.7%	0.0%	5.2%	7.0%	0.0%	0.0%	0.4%	3.8%	0.0%	11.6%	0.0%	2.8%	0.6%	1.2%	0.0%	17.8%	2.8%	44.8%
1990	3133	2,3,4	0.5%	0.0%	0.0%	0.4%	0.0%	17.2%	3.6%	0.0%	0.0%	0.8%	0.8%	0.0%	20.7%	0.0%	5.2%	0.2%	1.4%	0.0%	12.8%	1.4%	34.9%
1991	2666	3,4,5	0.1%	0.0%	0.0%	0.4%	0.0%	7.9%	1.4%	0.0%	0.2%	0.0%	2.0%	0.0%	9.0%	0.0%	1.5%	0.5%	1.1%	0.0%	13.4%	0.6%	62.2%
1992	2072	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	726	2,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	280	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	3585	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.5%	0.0%	0.0%	0.0%	0.5%	0.0%	0.5%	0.0%	0.2%	0.3%	0.0%	0.0%	0.8%	3.1%	93.8%
1996	3270	2,3,4,5	0.3%	0.1%	0.0%	0.0%	0.2%	0.0%	0.6%	0.0%	0.0%	0.0%	0.9%	0.0%	6.0%	0.0%	0.1%	0.0%	0.1%	0.0%	14.9%	2.8%	74.2%
1997	3242	2,3,4,5	1.4%	0.0%	0.0%	1.0%	0.2%	3.9%	1.0%	0.0%	0.0%	0.3%	0.4%	0.0%	7.4%	0.0%	0.8%	0.0%	0.1%	0.0%	11.6%	4.5%	67.4%
1998	5799	2,3,4,5	1.4%	0.1%	0.1%	1.7%	1.1%	0.1%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	3.1%	0.0%	0.4%	0.0%	0.1%	0.0%	9.9%	5.6%	76.4%
1999	7097	2,3,4,5	0.9%	0.1%	0.3%	0.6%	0.5%	1.2%	1.2%	0.0%	0.0%	0.1%	0.1%	0.0%	11.7%	0.0%	2.2%	0.0%	0.0%	0.0%	7.4%	3.8%	69.9%
2000	6378	2,3,4,5	1.3%	0.0%	0.1%	0.0%	0.1%	6.1%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%	5.4%	0.0%	3.9%	0.0%	0.0%	0.0%	11.1%	4.2%	64.3%
2001	9506	2,3,4,5	0.6%	0.0%	0.1%	0.0%	0.3%	7.2%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	18.9%	0.0%	4.8%	0.0%	0.3%	0.0%	13.7%	3.8%	48.7%
2002	7017	2,3,4,5	1.0%	0.1%	0.0%	0.7%	0.5%	7.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	15.5%	0.0%	9.7%	0.1%	0.1%	0.0%	10.5%	4.0%	49.4%
2003	10784	2,3,4,5	0.5%	0.0%	0.0%	0.2%	0.0%	5.7%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.3%	0.0%	2.8%	0.0%	0.2%	0.0%	7.0%	2.0%	74.3%
2004	14552	2,3,4,5	0.3%	0.0%	0.0%	0.2%	0.2%	3.5%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	7.6%	0.0%	2.9%	0.0%	0.5%	0.0%	4.9%	2.0%	77.1%
2005	8371	2,3,4,5	0.4%	0.0%	0.0%	0.4%	0.5%	8.3%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.7%	0.0%	5.9%	0.0%	0.2%	0.0%	10.0%	1.8%	59.9%
2006	6700	2,3,4,5	0.3%	0.0%	0.0%	1.0%	0.6%	3.7%	1.4%	0.0%	0.1%	0.0%	0.0%	0.0%	5.0%	0.0%	1.9%	0.0%	0.2%	0.0%	8.4%	1.4%	75.8%
2007	8447	2,3,4,5	0.7%	0.1%	0.1%	0.3%	0.1%	4.6%	1.7%	0.0%	0.1%	0.0%	0.1%	0.0%	4.9%	0.0%	3.6%	0.0%	0.4%	0.0%	7.2%	2.3%	73.8%
2008	7133	2,3,4,5	0.3%	0.0%	0.0%	0.2%	0.3%	3.5%	1.6%	0.0%	0.1%	0.0%	0.0%	0.0%	3.9%	0.0%	1.4%	0.1%	0.1%	0.0%	12.4%	2.3%	73.8%
2009	11295	2,3,4,5	0.2%	0.0%	0.0%	0.2%	0.1%	1.8%	3.7%	0.0%	0.4%	0.0%	0.0%	0.0%	2.9%	0.0%	4.6%	0.1%	2.0%	0.0%	10.4%	3.4%	70.2%
2010	6256	2,3,4,5	0.7%	0.1%	0.0%	1.0%	0.4%	6.4%	3.1%	0.0%	0.1%	0.0%	0.0%	0.0%	11.7%	0.0%	9.7%	0.0%	0.5%	0.0%	26.9%	2.7%	36.7%
1979-2010	6674		0.6%	0.0%	0.0%	0.5%	0.3%	4.9%	1.9%	0.0%	0.1%	0.1%	0.5%	0.0%	8.6%	0.0%	3.4%	0.1%	0.4%	0.0%	11.1%	2.9%	64.6%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	2738		0.2%	0.0%	0.0%	0.6%	0.0%	7.6%	3.1%	0.0%	0.0%	0.3%	1.8%	0.0%	10.5%	0.0%	2.4%	0.4%	0.9%	0.0%	11.2%	2.0%	58.9%
1996-1998	4104		1.1%	0.0%	0.0%	0.9%	0.5%	1.3%	0.5%	0.0%	0.0%	0.1%	0.5%	0.0%	5.5%	0.0%	0.4%	0.0%	0.1%	0.0%	12.1%	4.3%	72.7%
1999-2010	8628		0.6%	0.0%	0.0%	0.4%	0.3%	4.9%	1.9%	0.0%	0.1%	0.0%	0.0%	0.0%	8.7%	0.0%	4.5%	0.0%	0.4%	0.0%	10.8%	2.8%	64.5%

Appendix C.38. Percent distribution of Lyons Ferry Yearling total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	188	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	464	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	1737	2,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	1769	2,3,5	0.3%	0.6%	0.0%	1.6%	0.0%	8.5%	6.7%	0.0%	0.0%	0.5%	3.4%	0.0%	13.9%	0.0%	2.8%	0.6%	1.8%	0.0%	16.9%	2.7%	39.7%
1990	3430	2,3,4	0.6%	0.0%	0.0%	0.6%	0.0%	18.5%	3.6%	0.0%	0.1%	0.8%	0.9%	0.0%	21.3%	0.0%	5.2%	0.3%	1.7%	0.0%	13.2%	1.4%	31.9%
1991	2799	3,4,5	0.2%	0.0%	0.0%	0.5%	0.0%	9.6%	1.4%	0.0%	0.2%	0.0%	1.9%	0.0%	10.1%	0.0%	1.6%	0.4%	1.2%	0.0%	13.2%	0.6%	59.2%
1992	2143	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	743	2,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	341	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	3921	2,3,4	0.3%	0.0%	0.0%	0.4%	0.2%	0.8%	0.5%	0.0%	0.0%	0.0%	0.7%	0.0%	0.8%	0.0%	0.2%	0.3%	0.1%	0.0%	5.8%	4.1%	85.7%
1996	3490	2,3,4,5	0.4%	0.1%	0.0%	1.3%	0.2%	0.8%	0.6%	0.0%	0.0%	0.0%	1.2%	0.0%	5.9%	0.0%	0.1%	0.0%	0.1%	0.0%	16.6%	3.3%	69.5%
1997	3419	2,3,4,5	1.8%	0.1%	0.0%	1.2%	0.3%	4.8%	1.1%	0.0%	0.0%	0.4%	0.5%	0.0%	7.6%	0.0%	0.8%	0.0%	0.1%	0.0%	12.8%	4.8%	63.9%
1998	5959	2,3,4,5	1.9%	0.1%	0.2%	2.1%	1.4%	0.1%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	3.1%	0.0%	0.4%	0.0%	0.1%	0.0%	10.3%	5.9%	74.3%
1999	7415	2,3,4,5	1.2%	0.1%	0.4%	0.6%	0.6%	1.2%	1.3%	0.0%	0.0%	0.1%	0.2%	0.0%	13.0%	0.0%	2.4%	0.0%	0.0%	0.0%	7.9%	4.0%	66.9%
2000	6698	2,3,4,5	1.7%	0.0%	0.1%	0.1%	0.1%	6.3%	3.9%	0.0%	0.0%	0.0%	0.0%	0.0%	6.3%	0.0%	4.2%	0.0%	0.0%	0.0%	11.7%	4.4%	61.2%
2001	10047	2,3,4,5	0.7%	0.0%	0.1%	0.0%	0.5%	7.1%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	20.7%	0.0%	5.1%	0.0%	0.5%	0.0%	13.6%	3.8%	46.0%
2002	7512	2,3,4,5	1.2%	0.2%	0.0%	0.7%	0.7%	7.0%	1.6%	0.0%	0.0%	0.0%	0.4%	0.0%	16.9%	0.0%	10.2%	0.1%	0.1%	0.0%	10.6%	4.1%	46.1%
2003	11351	2,3,4,5	0.6%	0.0%	0.0%	0.2%	0.1%	6.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	7.4%	0.0%	3.1%	0.0%	0.3%	0.0%	8.1%	2.2%	70.6%
2004	15023	2,3,4,5	0.3%	0.0%	0.0%	0.3%	0.2%	3.5%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	8.8%	0.0%	3.1%	0.0%	0.6%	0.0%	5.3%	2.2%	74.7%
2005	8733	2,3,4,5	0.4%	0.0%	0.0%	0.4%	0.7%	8.4%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	11.5%	0.0%	6.3%	0.0%	0.2%	0.0%	10.6%	1.8%	57.4%
2006	7034	2,3,4,5	0.4%	0.0%	0.0%	1.2%	0.8%	3.9%	1.6%	0.0%	0.1%	0.0%	0.0%	0.0%	5.7%	0.0%	2.1%	0.1%	0.4%	0.0%	9.9%	1.6%	72.2%
2007	8807	2,3,4,5	0.9%	0.3%	0.1%	0.4%	0.1%	4.8%	1.8%	0.0%	0.1%	0.0%	0.1%	0.0%	5.9%	0.0%	3.9%	0.0%	0.5%	0.0%	7.7%	2.5%	70.8%
2008	7530	2,3,4,5	0.3%	0.0%	0.0%	0.2%	0.4%	3.6%	1.8%	0.0%	0.2%	0.0%	0.0%	0.0%	4.3%	0.0%	1.5%	0.2%	0.3%	0.0%	14.6%	2.6%	69.9%
2009	11721	2,3,4,5	0.3%	0.1%	0.0%	0.2%	0.1%	1.8%	4.1%	0.0%	0.5%	0.0%	0.0%	0.0%	3.3%	0.0%	4.9%	0.1%	2.6%	0.0%	10.9%	3.7%	67.6%
2010	6621	2,3,4,5	0.9%	0.1%	0.0%	1.1%	0.5%	6.3%	3.8%	0.0%	0.2%	0.0%	0.0%	0.0%	12.5%	0.0%	10.0%	0.0%	0.6%	0.0%	26.7%	2.7%	34.6%
1979-2010	7015		0.8%	0.1%	0.0%	0.7%	0.4%	5.4%	2.1%	0.0%	0.1%	0.1%	0.5%	0.0%	9.4%	0.0%	3.6%	0.1%	0.6%	0.0%	11.9%	3.1%	61.2%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	2980		0.4%	0.1%	0.0%	0.8%	0.1%	9.4%	3.1%	0.0%	0.1%	0.3%	1.7%	0.0%	11.5%	0.0%	2.4%	0.4%	1.2%	0.0%	12.3%	2.2%	54.1%
1996-1998	4289		1.4%	0.1%	0.1%	1.5%	0.6%	1.9%	0.5%	0.0%	0.0%	0.1%	0.6%	0.0%	5.5%	0.0%	0.4%	0.0%	0.1%	0.0%	13.2%	4.7%	69.3%
1999-2010	9041		0.7%	0.1%	0.1%	0.5%	0.4%	5.0%	2.2%	0.0%	0.1%	0.0%	0.1%	0.0%	9.7%	0.0%	4.7%	0.0%	0.5%	0.0%	11.5%	3.0%	61.5%

Appendix C.39. Percent distribution of Nanaimo River Fall (Lower Strait of Georgia Natural) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			Esc.
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	247	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	1319	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	1783	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	515	2,4,5	4.1%	0.0%	0.0%	1.9%	2.7%	1.7%	0.8%	1.0%	36.3%	12.8%	20.0%	0.0%	0.0%	0.0%	0.0%	0.4%	1.0%	0.0%	0.0%	5.6%	11.7%
1985	54	3,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	23	4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	8	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	227	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	742	2,3,4	0.3%	0.3%	0.0%	0.8%	2.2%	0.5%	0.9%	6.1%	34.0%	0.8%	11.5%	0.0%	0.8%	0.0%	0.0%	2.8%	0.7%	0.0%	0.3%	7.8%	30.3%
1992	1596	2,3,4,5	0.1%	0.0%	0.0%	0.8%	2.9%	5.5%	0.3%	7.3%	30.5%	1.3%	7.2%	0.0%	0.4%	0.0%	0.1%	0.8%	0.6%	0.0%	0.0%	1.2%	40.9%
1993	1332	2,3,4,5	0.1%	0.2%	0.0%	1.5%	1.7%	2.5%	0.5%	4.8%	49.2%	1.1%	5.2%	0.0%	0.6%	0.0%	0.0%	0.2%	1.1%	0.0%	0.0%	2.9%	28.6%
1994	397	2,3,4,5	0.5%	0.0%	0.0%	0.8%	1.8%	4.0%	1.3%	0.8%	24.9%	0.0%	8.6%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	0.0%	0.0%	0.8%	55.4%
1995	1198	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.9%	1.2%	0.9%	0.0%	15.4%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.3%	4.1%	74.2%
1996	721	2,3,4,5	0.0%	0.4%	0.0%	0.0%	1.0%	0.0%	0.6%	0.0%	54.9%	0.0%	2.4%	0.0%	0.3%	0.0%	0.0%	0.6%	2.6%	0.0%	4.6%	5.1%	27.6%
1997	223	2,3,4,5	6.3%	0.0%	0.0%	3.6%	0.0%	1.3%	0.4%	0.0%	31.4%	2.2%	1.3%	0.0%	0.0%	1.3%	0.0%	4.0%	3.1%	0.0%	0.0%	3.1%	41.7%
1998	188	2,3,4,5	1.1%	3.2%	0.0%	5.3%	3.2%	0.5%	0.0%	0.0%	18.1%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	14.4%	52.1%
1999	251	2,3,4,5	0.0%	0.0%	0.0%	0.0%	2.4%	0.0%	2.4%	0.0%	23.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	2.0%	0.0%	1.2%	2.8%	62.9%
2000	162	3,4,5	1.2%	0.0%	0.0%	0.0%	0.0%	3.1%	6.2%	0.0%	23.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.6%	17.9%	42.6%
2001	290	2,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	7.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.1%	0.0%	0.0%	3.4%	0.0%	83.8%
2002	767	2,3,5	0.3%	0.1%	0.0%	0.0%	0.9%	1.2%	0.0%	0.0%	33.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	2.3%	3.0%	0.0%	4.8%	0.3%	53.7%
2003	758	2,3,4	0.5%	0.5%	0.0%	0.0%	5.5%	3.8%	0.7%	0.0%	15.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	1.6%	0.0%	1.8%	0.3%	67.8%
2004	805	2,3,4,5	1.2%	0.0%	0.0%	0.6%	6.3%	5.2%	2.0%	0.0%	8.6%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	1.5%	2.1%	0.0%	6.1%	1.2%	64.2%
2005	494	3,4,5	0.6%	0.0%	0.6%	1.6%	9.1%	6.5%	1.6%	0.0%	6.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	0.8%	0.0%	20.0%	0.0%	50.2%
2006	1221	2,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.9%	0.0%	4.8%	0.0%	92.1%
2007	993	3,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	257	4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	6	5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1979-2010	686		1.0%	0.3%	0.0%	1.0%	2.4%	2.3%	1.1%	1.2%	24.4%	1.1%	3.5%	0.0%	0.2%	0.1%	0.0%	1.4%	1.3%	0.0%	3.2%	4.0%	51.8%
1979-1984	515		4.1%	0.0%	0.0%	1.9%	2.7%	1.7%	0.8%	1.0%	36.3%	12.8%	20.0%	0.0%	0.0%	0.0%	0.0%	0.4%	1.0%	0.0%	0.0%	5.6%	11.7%
1985-1995	1053		0.2%	0.1%	0.0%	0.8%	1.9%	2.7%	0.8%	3.8%	30.8%	0.7%	6.9%	0.0%	0.4%	0.0%	0.0%	0.8%	0.9%	0.0%	0.1%	3.3%	45.9%
1996-1998	377		2.4%	1.2%	0.0%	3.0%	1.4%	0.6%	0.3%	0.0%	34.8%	0.7%	1.6%	0.0%	0.1%	0.4%	0.0%	1.5%	1.9%	0.0%	1.9%	7.5%	40.5%
1999-2010	594		0.5%	0.1%	0.1%	0.3%	3.0%	2.6%	1.7%	0.0%	14.9%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	1.9%	1.3%	0.0%	6.0%	2.8%	64.7%

Appendix C.40. Percent distribution of Nanaimo River Fall (Lower Strait of Georgia Natural) total fishing mortalities among fisheries and escapement.

	Estimated		AABM							ISBM													
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	285	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	1572	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	1879	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	539	2,4,5	4.3%	0.0%	0.0%	1.9%	2.8%	1.7%	0.7%	1.1%	37.5%	12.6%	19.1%	0.0%	0.0%	0.0%	0.0%	0.4%	1.1%	0.0%	0.0%	5.8%	11.1%
1985	58	3,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	29	4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	29	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	431	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	1180	2,3,4	0.2%	0.4%	0.0%	0.8%	2.1%	1.8%	0.7%	6.4%	48.6%	1.0%	8.2%	0.0%	0.7%	0.0%	0.0%	2.7%	0.9%	0.0%	0.2%	6.3%	19.1%
1992	2278	2,3,4,5	0.1%	0.0%	0.0%	0.8%	2.7%	5.2%	0.3%	7.6%	43.8%	1.2%	5.7%	0.0%	0.4%	0.0%	0.1%	0.8%	0.8%	0.0%	0.0%	1.9%	28.7%
1993	1624	2,3,4,5	0.1%	0.4%	0.0%	1.7%	1.5%	2.7%	0.5%	5.6%	53.7%	1.3%	4.4%	0.0%	0.6%	0.0%	0.0%	0.2%	1.0%	0.0%	0.0%	2.9%	23.5%
1994	520	2,3,4,5	0.6%	0.0%	0.0%	0.6%	1.9%	3.8%	1.2%	0.8%	38.7%	0.0%	7.5%	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	0.0%	0.0%	1.0%	42.3%
1995	1645	2,3,4,5	0.0%	0.0%	0.0%	0.0%	1.2%	1.3%	0.8%	0.0%	30.4%	0.0%	3.1%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	0.0%	0.2%	7.4%	54.0%
1996	960	2,3,4,5	0.0%	0.9%	0.0%	0.0%	0.7%	0.3%	0.4%	0.0%	62.3%	0.0%	2.3%	0.0%	0.2%	0.0%	0.0%	0.5%	2.8%	0.0%	3.5%	5.2%	20.7%
1997	284	2,3,4,5	6.3%	0.0%	0.0%	3.5%	0.0%	1.4%	0.4%	0.0%	38.4%	2.1%	2.1%	0.0%	0.0%	1.4%	0.0%	4.6%	3.9%	0.0%	0.0%	3.2%	32.7%
1998	259	2,3,4,5	1.2%	5.4%	0.0%	5.4%	4.6%	0.4%	0.0%	0.0%	28.2%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	15.1%	37.8%
1999	303	2,3,4,5	0.0%	0.0%	0.0%	0.0%	2.6%	0.0%	2.0%	0.0%	33.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%	2.6%	0.0%	1.0%	3.3%	52.1%
2000	180	3,4,5	1.1%	0.0%	0.0%	0.0%	0.0%	2.8%	6.1%	0.0%	26.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	20.0%	38.3%
2001	521	2,4,5	0.2%	0.0%	0.0%	0.0%	1.3%	1.0%	0.2%	0.0%	38.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.6%	4.6%	0.0%	2.5%	0.2%	46.6%
2002	956	2,3,5	0.4%	0.1%	0.0%	0.0%	2.6%	1.3%	0.1%	0.0%	39.4%	0.0%	2.5%	0.0%	0.1%	0.0%	0.0%	2.5%	3.5%	0.0%	4.1%	0.3%	43.1%
2003	874	2,3,4	0.6%	0.7%	0.1%	0.2%	8.2%	3.8%	1.0%	0.0%	19.2%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	1.9%	2.7%	0.0%	2.1%	0.5%	58.8%
2004	878	2,3,4,5	1.4%	0.0%	0.0%	0.7%	9.3%	5.0%	2.2%	0.0%	10.6%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	1.5%	2.5%	0.0%	5.7%	1.4%	58.9%
2005	520	3,4,5	0.6%	0.0%	0.6%	1.5%	11.3%	6.2%	1.7%	0.0%	7.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	1.0%	0.0%	19.2%	0.0%	47.7%
2006	1494	2,4,5	0.3%	0.0%	0.0%	0.1%	1.0%	0.5%	0.6%	0.0%	14.2%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.6%	1.6%	0.0%	4.8%	1.0%	75.3%
2007	1085	3,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	261	4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	6	5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1979-2010	883		1.0%	0.5%	0.0%	1.0%	3.2%	2.3%	1.1%	1.3%	33.6%	1.1%	3.3%	0.0%	0.2%	0.1%	0.0%	1.5%	1.9%	0.0%	2.9%	4.4%	40.6%
1979-1984	539		4.3%	0.0%	0.0%	1.9%	2.8%	1.7%	0.7%	1.1%	37.5%	12.6%	19.1%	0.0%	0.0%	0.0%	0.0%	0.4%	1.1%	0.0%	0.0%	5.8%	11.1%
1985-1995	1449		0.2%	0.2%	0.0%	0.8%	1.9%	3.0%	0.7%	4.1%	43.0%	0.7%	5.8%	0.0%	0.3%	0.0%	0.0%	0.7%	1.2%	0.0%	0.1%	3.9%	33.5%
1996-1998	501		2.5%	2.1%	0.0%	3.0%	1.8%	0.7%	0.3%	0.0%	43.0%	0.7%	1.9%	0.0%	0.1%	0.5%	0.0%	1.7%	2.2%	0.0%	1.4%	7.8%	30.4%
1999-2010	716		0.6%	0.1%	0.1%	0.3%	4.6%	2.6%	1.7%	0.0%	23.7%	0.0%	0.3%	0.0%	0.1%	0.0%	0.0%	2.1%	2.3%	0.0%	5.5%	3.3%	52.6%

Appendix C.41. Percent distribution of Nicola River Spring (Fraser Early) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM														Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal				
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	166	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	1242	2,3,4	0.0%	0.0%	0.0%	0.3%	1.1%	0.9%	0.0%	0.0%	11.7%	0.0%	12.8%	0.0%	0.9%	0.0%	0.0%	1.1%	1.7%	0.0%	0.0%	4.0%	65.5%
1990	281	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%	2.1%	0.0%	14.2%	0.0%	1.4%	0.0%	0.0%	0.0%	2.5%	0.0%	0.0%	14.2%	63.7%
1991	1268	2,3,4,5	0.2%	0.2%	0.0%	0.0%	0.6%	3.7%	0.0%	0.2%	4.9%	0.2%	14.7%	0.0%	0.7%	0.0%	0.0%	0.2%	1.3%	0.0%	0.0%	8.1%	65.1%
1992	504	2,3,4,5	0.0%	0.0%	0.0%	4.4%	1.6%	4.8%	0.0%	0.0%	6.3%	2.2%	7.9%	0.0%	5.4%	0.0%	0.0%	0.0%	4.4%	0.0%	0.0%	9.5%	53.6%
1993	1124	2,3,4,5	0.0%	0.0%	0.0%	2.7%	1.2%	5.0%	1.2%	0.0%	4.7%	0.0%	11.9%	0.0%	1.8%	0.0%	0.0%	0.0%	2.0%	0.0%	0.0%	5.6%	64.1%
1994	2015	2,3,4,5	0.0%	0.0%	0.0%	0.2%	0.0%	3.1%	0.4%	0.0%	3.2%	0.0%	1.5%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.7%	83.5%
1995	1821	2,3,4,5	0.0%	0.0%	0.0%	0.2%	0.7%	1.0%	0.5%	0.0%	2.6%	0.0%	3.5%	0.0%	0.1%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	3.5%	87.6%
1996	69	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	18.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	81.2%
1997	200	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.0%	0.0%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.5%	79.0%
1998	827	2,3,4,5	0.0%	0.0%	0.0%	0.0%	1.5%	0.0%	0.0%	0.0%	1.2%	0.0%	5.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.1%	84.2%
1999	2414	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	6.9%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	89.7%
2000	1692	2,3,4,5	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	4.0%	0.0%	8.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.2%	81.2%
2001	2146	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.4%	0.1%	0.0%	0.0%	3.5%	0.0%	7.1%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	83.8%
2002	2110	2,3,4,5	0.0%	0.0%	0.0%	1.2%	0.3%	0.8%	0.0%	0.0%	1.1%	0.0%	3.8%	0.0%	0.7%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	2.6%	89.4%
2003	1760	2,3,4,5	0.1%	0.0%	0.0%	2.2%	0.0%	0.9%	0.5%	0.0%	2.3%	0.0%	0.6%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.5%	86.5%
2004	436	2,3,4,5	0.0%	0.0%	0.0%	1.8%	0.0%	1.8%	0.0%	0.0%	3.4%	0.0%	23.9%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	68.1%
2005	368	2,3,4,5	0.0%	0.0%	0.0%	1.1%	0.0%	4.1%	0.0%	0.0%	6.5%	0.0%	7.1%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.5%	65.2%
2006	382	2,3,4,5	0.0%	0.0%	0.0%	1.6%	0.0%	1.8%	0.0%	0.0%	2.9%	0.0%	4.5%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.2%	78.5%
2007	109	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	8.3%	0.0%	0.0%	0.0%	0.0%	4.6%	0.0%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	28.4%	56.9%
2008	580	2,3,4,5	0.0%	0.0%	0.0%	1.0%	0.7%	0.0%	0.0%	0.0%	3.4%	0.0%	6.7%	0.0%	1.9%	0.0%	0.3%	0.0%	0.0%	0.0%	0.5%	3.6%	81.7%
2009	234	2,3,4,5	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	9.4%	0.0%	5.1%	0.0%	3.4%	0.0%	0.0%	0.0%	1.3%	0.0%	0.0%	23.5%	56.8%
2010	2297	3,4,5	0.3%	0.0%	0.0%	1.1%	0.7%	0.0%	0.1%	0.0%	1.0%	0.0%	4.4%	0.0%	0.6%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.1%	91.1%
1979-2010	1085		0.0%	0.0%	0.0%	0.8%	0.5%	1.7%	0.1%	0.0%	3.7%	0.1%	8.0%	0.0%	1.0%	0.0%	0.0%	0.1%	0.9%	0.0%	0.0%	7.7%	75.3%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	1179		0.0%	0.0%	0.0%	1.1%	0.7%	2.9%	0.3%	0.0%	5.1%	0.3%	9.5%	0.0%	1.5%	0.0%	0.0%	0.2%	1.7%	0.0%	0.0%	7.5%	69.0%
1996-1998	365		0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	2.4%	0.0%	8.8%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	0.0%	4.9%	81.4%
1999-2010	1211		0.0%	0.0%	0.0%	0.9%	0.3%	1.5%	0.0%	0.0%	3.2%	0.0%	6.9%	0.0%	1.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	8.5%	77.4%

Appendix C.42. Percent distribution of Nicola River Spring (Fraser Early) total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	19	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	186	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	1279	2,3,4	0.0%	0.0%	0.0%	0.3%	1.2%	1.3%	0.0%	0.0%	13.0%	0.0%	12.4%	0.0%	0.9%	0.0%	0.0%	1.1%	2.1%	0.0%	0.0%	4.1%	63.6%
1990	292	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	3.1%	0.0%	13.7%	0.0%	1.7%	0.0%	0.0%	0.0%	3.1%	0.0%	0.0%	14.7%	61.3%
1991	1311	2,3,4,5	0.2%	0.5%	0.0%	0.0%	0.6%	4.1%	0.0%	0.3%	5.9%	0.2%	14.3%	0.0%	0.8%	0.0%	0.0%	0.2%	1.6%	0.0%	0.0%	8.4%	62.9%
1992	557	2,3,4,5	0.0%	0.0%	0.0%	4.8%	1.8%	5.0%	0.0%	0.0%	9.3%	2.3%	7.2%	0.0%	5.7%	0.0%	0.0%	0.0%	6.1%	0.0%	0.0%	9.2%	48.5%
1993	1174	2,3,4,5	0.0%	0.0%	0.0%	3.1%	1.3%	5.7%	1.2%	0.0%	5.9%	0.0%	11.5%	0.0%	2.0%	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	5.7%	61.3%
1994	2047	2,3,4,5	0.0%	0.0%	0.0%	0.2%	0.0%	3.6%	0.4%	0.0%	3.6%	0.0%	1.5%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.2%	82.2%
1995	1867	2,3,4,5	0.0%	0.0%	0.0%	0.2%	0.9%	1.2%	0.5%	0.0%	2.8%	0.0%	4.9%	0.0%	0.1%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	3.6%	85.5%
1996	75	2,3,4,5	0.0%	0.0%	0.0%	4.0%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	74.7%
1997	263	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.9%	0.0%	15.2%	0.0%	0.0%	0.0%	0.0%	0.0%	9.5%	0.0%	0.0%	5.3%	60.1%
1998	857	2,3,4,5	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	1.6%	0.0%	6.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.4%	81.2%
1999	2424	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	6.9%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	89.4%
2000	1749	2,3,4,5	0.0%	0.0%	0.0%	0.0%	2.3%	0.0%	0.0%	0.0%	5.0%	0.0%	8.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.4%	78.6%
2001	2175	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.5%	0.1%	0.0%	0.0%	4.3%	0.0%	7.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.6%	82.7%
2002	2129	2,3,4,5	0.0%	0.0%	0.0%	1.4%	0.4%	0.8%	0.0%	0.0%	1.3%	0.0%	3.9%	0.0%	0.8%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	2.7%	88.6%
2003	1783	2,3,4,5	0.1%	0.0%	0.0%	2.4%	0.0%	1.0%	0.7%	0.0%	2.6%	0.0%	0.6%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.8%	85.4%
2004	444	2,3,4,5	0.0%	0.0%	0.0%	2.3%	0.0%	1.8%	0.0%	0.0%	4.3%	0.0%	23.6%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	66.9%
2005	377	2,3,4,5	0.0%	0.0%	0.0%	1.3%	0.0%	4.0%	0.0%	0.0%	7.4%	0.0%	6.9%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.2%	63.7%
2006	391	2,3,4,5	0.0%	0.0%	0.0%	1.8%	0.0%	2.0%	0.0%	0.0%	3.8%	0.0%	4.3%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.7%	76.7%
2007	111	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	8.1%	0.0%	0.0%	0.0%	0.0%	4.5%	0.0%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	29.7%	55.9%
2008	605	2,3,4,5	0.0%	0.0%	0.0%	1.3%	1.0%	0.0%	0.0%	0.0%	6.1%	0.0%	6.4%	0.0%	2.3%	0.0%	0.3%	0.0%	0.0%	0.0%	0.5%	3.6%	78.3%
2009	293	2,3,4,5	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	23.9%	0.0%	4.4%	0.0%	3.4%	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	20.1%	45.4%
2010	2309	3,4,5	0.3%	0.0%	0.0%	1.2%	0.8%	0.0%	0.1%	0.0%	1.1%	0.0%	4.5%	0.0%	0.6%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.1%	90.6%
1979-2010	1114		0.0%	0.0%	0.0%	1.1%	0.6%	1.9%	0.1%	0.0%	5.3%	0.1%	8.6%	0.0%	1.1%	0.0%	0.0%	0.1%	1.3%	0.0%	0.0%	7.7%	72.0%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	1218		0.0%	0.1%	0.0%	1.2%	0.8%	3.3%	0.3%	0.0%	6.2%	0.4%	9.4%	0.0%	1.7%	0.0%	0.0%	0.2%	2.2%	0.0%	0.0%	7.7%	66.5%
1996-1998	398		0.0%	0.0%	0.0%	1.3%	0.7%	0.4%	0.0%	0.0%	3.8%	0.0%	14.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	0.0%	0.0%	4.6%	72.0%
1999-2010	1232		0.0%	0.0%	0.0%	1.0%	0.4%	1.5%	0.1%	0.0%	5.1%	0.0%	6.8%	0.0%	1.1%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	8.5%	75.2%

Appendix C.43. Percent distribution of Nisqually Fall Fingerling reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	10	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	77	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	197	2,3,4	0.0%	0.0%	0.0%	2.5%	0.0%	14.7%	0.0%	2.5%	10.2%	0.0%	6.1%	0.0%	4.6%	0.0%	0.0%	10.2%	46.7%	0.0%	1.0%	0.0%	1.5%
1984	205	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	31.2%	0.0%	0.0%	1.5%	0.0%	2.4%	0.0%	1.5%	0.0%	0.0%	15.6%	21.0%	0.0%	21.0%	0.0%	5.9%
1985	61	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	27.9%	3.3%	0.0%	0.0%	0.0%	4.9%	0.0%	6.6%	0.0%	0.0%	23.0%	18.0%	0.0%	11.5%	0.0%	4.9%
1986	112	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	15.2%	0.0%	0.0%	12.5%	0.0%	1.8%	0.0%	0.0%	0.0%	0.0%	12.5%	14.3%	0.0%	24.1%	0.0%	19.6%
1987	144	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	9.0%	0.0%	1.4%	12.5%	2.1%	2.1%	0.0%	5.6%	0.0%	0.0%	4.2%	12.5%	0.0%	34.7%	2.8%	13.2%
1988	277	2,3,4,5	0.0%	0.0%	0.0%	0.7%	2.2%	5.4%	0.0%	4.0%	13.7%	2.2%	5.4%	0.0%	8.7%	0.0%	0.0%	7.2%	10.5%	0.0%	10.1%	0.0%	30.0%
1989	1035	2,3,4,5	0.0%	0.0%	0.0%	0.3%	0.0%	4.4%	6.3%	0.0%	2.5%	0.0%	4.3%	0.0%	13.3%	2.1%	0.4%	12.4%	17.5%	0.0%	28.1%	0.4%	8.0%
1990	1290	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	22.6%	5.8%	0.0%	3.1%	0.2%	0.2%	0.0%	10.2%	0.0%	0.1%	2.1%	11.7%	0.0%	35.8%	0.0%	8.2%
1991	243	2,3,4,5	0.0%	0.0%	0.0%	2.1%	0.0%	8.2%	2.1%	0.0%	3.3%	0.0%	2.5%	0.0%	16.5%	0.0%	0.8%	6.6%	23.5%	0.0%	16.5%	0.0%	18.1%
1992	379	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.5%	7.7%	4.0%	0.0%	2.9%	0.0%	2.6%	0.0%	7.7%	0.0%	0.0%	10.3%	16.4%	0.0%	8.2%	0.0%	39.8%
1993	589	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	12.2%	1.9%	0.3%	3.4%	0.0%	3.2%	0.0%	2.7%	0.0%	0.7%	3.4%	18.3%	0.0%	19.2%	0.0%	34.6%
1994	1000	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.2%	0.5%	0.0%	2.4%	0.0%	2.5%	0.0%	0.8%	0.0%	0.0%	5.2%	20.1%	0.0%	17.1%	0.4%	46.8%
1995	1736	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.4%	5.4%	3.1%	0.0%	1.7%	0.0%	0.4%	0.0%	2.6%	0.0%	0.0%	1.5%	24.4%	0.0%	30.8%	0.0%	29.6%
1996	962	2,3,4,5	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	3.3%	0.0%	0.8%	0.0%	1.7%	0.0%	0.0%	1.6%	21.3%	0.0%	40.5%	0.0%	29.4%
1997	619	2,3,4,5	0.0%	0.3%	0.0%	0.0%	0.5%	2.7%	4.5%	0.0%	0.6%	0.0%	0.2%	0.0%	0.8%	0.0%	1.0%	0.8%	22.1%	0.0%	18.1%	1.3%	47.0%
1998	1098	2,3,4,5	0.2%	0.0%	0.0%	0.0%	0.4%	0.5%	0.7%	0.0%	1.5%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.5%	11.4%	0.0%	35.9%	0.7%	47.8%
1999	1475	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	2.7%	0.0%	2.9%	0.0%	0.0%	0.0%	2.8%	0.0%	0.3%	1.3%	19.0%	0.0%	42.7%	0.0%	27.8%
2000	579	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	15.2%	3.1%	0.0%	2.9%	0.0%	0.0%	0.0%	1.7%	0.0%	1.6%	2.6%	15.7%	0.0%	43.2%	0.0%	14.0%
2001	965	2,3,4,5	0.2%	0.0%	0.0%	0.0%	0.0%	3.2%	2.9%	0.0%	1.3%	0.0%	0.0%	0.0%	4.2%	0.0%	0.4%	0.4%	15.4%	0.0%	29.2%	0.0%	42.6%
2002	1364	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	3.3%	0.0%	0.8%	0.0%	0.0%	0.0%	3.4%	0.0%	0.6%	0.6%	7.8%	0.0%	41.2%	3.2%	32.0%
2003	1587	2,3,4,5	0.1%	0.0%	0.0%	0.0%	0.6%	5.5%	1.6%	0.0%	1.1%	0.0%	0.0%	0.0%	4.3%	0.0%	0.0%	0.4%	11.2%	0.0%	43.5%	1.8%	29.9%
2004	1630	2,3,4,5	0.0%	0.1%	0.0%	0.0%	0.0%	5.9%	1.1%	0.0%	1.2%	0.0%	0.0%	0.0%	6.8%	0.0%	0.6%	0.6%	8.0%	0.0%	31.2%	0.0%	44.5%
2005	1160	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	5.5%	2.0%	0.0%	3.4%	0.0%	0.3%	0.0%	3.7%	0.0%	1.9%	0.6%	6.1%	0.0%	10.3%	0.0%	66.1%
2006	2791	2,3,4,5	0.1%	0.0%	0.0%	0.0%	0.0%	6.3%	1.6%	0.0%	1.8%	0.0%	0.0%	0.0%	5.2%	0.0%	0.4%	0.8%	5.7%	0.0%	38.9%	0.0%	39.3%
2007	3010	2,3,4,5	0.0%	0.0%	0.0%	0.1%	0.0%	10.2%	1.5%	0.0%	0.8%	0.0%	0.0%	0.0%	4.7%	0.0%	0.4%	0.8%	10.7%	0.0%	35.3%	0.0%	35.6%
2008	988	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	5.4%	3.3%	0.0%	4.3%	0.0%	0.0%	0.0%	1.5%	0.0%	0.4%	0.8%	11.3%	0.0%	47.2%	0.0%	25.8%
2009	1446	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	0.0%	0.1%	0.8%	8.0%	0.0%	39.8%	0.0%	43.4%
2010	1792	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.6%	1.5%	0.0%	0.1%	0.0%	0.0%	0.0%	3.5%	0.0%	0.3%	0.2%	1.3%	0.0%	39.3%	4.0%	45.2%
1979-2010	1026		0.0%	0.0%	0.0%	0.2%	0.2%	8.7%	2.2%	0.3%	3.4%	0.2%	1.4%	0.0%	4.6%	0.1%	0.4%	4.5%	15.4%	0.0%	28.4%	0.5%	29.7%
1979-1984	201		0.0%	0.0%	0.0%	1.3%	0.0%	23.0%	0.0%	1.3%	5.8%	0.0%	4.3%	0.0%	3.0%	0.0%	0.0%	12.9%	33.8%	0.0%	11.0%	0.0%	3.7%
1985-1995	624		0.0%	0.0%	0.0%	0.3%	0.3%	11.1%	2.4%	0.5%	5.3%	0.4%	2.7%	0.0%	6.8%	0.2%	0.2%	8.0%	17.0%	0.0%	21.5%	0.3%	23.0%
1996-1998	893		0.1%	0.1%	0.0%	0.0%	0.3%	1.1%	2.1%	0.0%	1.8%	0.0%	0.3%	0.0%	1.0%	0.0%	0.3%	0.9%	18.3%	0.0%	31.5%	0.7%	41.4%
1999-2010	1566		0.0%	0.0%	0.0%	0.0%	0.0%	6.0%	2.4%	0.0%	1.7%	0.0%	0.0%	0.0%	3.7%	0.0%	0.6%	0.8%	10.0%	0.0%	36.8%	0.7%	37.2%

Appendix C.44. Percent distribution of Nisqually Fall Fingerling total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	25	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	99	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	298	2,3,4	0.0%	0.0%	0.0%	1.7%	0.0%	13.1%	0.0%	1.7%	7.4%	0.0%	4.7%	0.0%	3.0%	0.0%	0.0%	8.4%	56.0%	0.0%	3.0%	0.0%	1.0%
1984	250	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	30.4%	0.0%	0.0%	1.2%	0.0%	2.0%	0.0%	1.2%	0.0%	0.0%	15.6%	23.6%	0.0%	21.2%	0.0%	4.8%
1985	81	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	27.2%	3.7%	0.0%	0.0%	0.0%	3.7%	0.0%	6.2%	0.0%	0.0%	22.2%	22.2%	0.0%	11.1%	0.0%	3.7%
1986	125	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	16.0%	0.0%	0.0%	12.8%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	11.2%	18.4%	0.0%	22.4%	0.0%	17.6%
1987	198	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	11.6%	0.0%	1.0%	10.6%	2.5%	1.5%	0.0%	5.6%	0.0%	0.0%	4.0%	17.7%	0.0%	33.3%	2.5%	9.6%
1988	478	2,3,4,5	0.0%	0.0%	0.0%	0.6%	2.1%	4.4%	0.0%	2.9%	28.9%	1.7%	3.6%	0.0%	6.5%	0.0%	0.0%	6.5%	16.1%	0.0%	9.4%	0.0%	17.4%
1989	1158	2,3,4,5	0.0%	0.0%	0.0%	0.4%	0.0%	5.4%	6.0%	0.0%	3.0%	0.0%	3.8%	0.0%	14.6%	2.2%	0.3%	11.7%	18.5%	0.0%	26.6%	0.4%	7.2%
1990	1390	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	23.5%	5.9%	0.0%	3.2%	0.2%	0.1%	0.0%	10.4%	0.0%	0.1%	2.0%	13.0%	0.0%	33.9%	0.0%	7.6%
1991	277	2,3,4,5	0.0%	0.0%	0.0%	2.2%	0.0%	9.0%	1.8%	0.0%	3.6%	0.0%	2.2%	0.0%	17.0%	0.0%	0.7%	6.1%	25.6%	0.0%	15.9%	0.0%	15.9%
1992	544	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.6%	6.6%	3.3%	0.0%	5.3%	0.0%	2.0%	0.0%	6.6%	0.0%	0.0%	11.4%	27.6%	0.0%	8.8%	0.0%	27.8%
1993	718	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	13.8%	1.7%	0.4%	4.5%	0.0%	2.8%	0.0%	2.9%	0.0%	0.7%	3.8%	20.2%	0.0%	20.9%	0.0%	28.4%
1994	1539	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	0.4%	0.0%	4.3%	0.0%	2.5%	0.0%	0.6%	0.0%	0.0%	4.9%	36.3%	0.0%	16.6%	0.4%	30.4%
1995	2001	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.4%	7.1%	2.9%	0.0%	2.1%	0.0%	0.6%	0.0%	2.4%	0.0%	0.0%	1.4%	27.3%	0.0%	29.9%	0.0%	25.7%
1996	1082	2,3,4,5	0.2%	0.0%	0.0%	0.0%	0.0%	0.6%	1.2%	0.0%	3.9%	0.0%	0.9%	0.0%	1.6%	0.0%	0.0%	1.5%	25.7%	0.0%	38.3%	0.0%	26.2%
1997	739	2,3,4,5	0.0%	0.5%	0.0%	0.0%	0.5%	3.0%	4.2%	0.0%	0.8%	0.0%	0.4%	0.0%	0.7%	0.0%	0.9%	0.8%	27.9%	0.0%	19.4%	1.5%	39.4%
1998	1490	2,3,4,5	0.2%	0.0%	0.0%	0.0%	0.5%	0.3%	0.6%	0.0%	2.3%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.5%	20.9%	0.0%	38.2%	0.8%	35.2%
1999	1655	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	2.7%	0.0%	3.4%	0.0%	0.0%	0.0%	3.1%	0.0%	0.3%	1.3%	22.3%	0.0%	41.8%	0.0%	24.8%
2000	712	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	13.9%	3.1%	0.0%	3.8%	0.0%	0.0%	0.0%	1.7%	0.0%	1.4%	2.2%	25.6%	0.0%	36.9%	0.0%	11.4%
2001	1151	2,3,4,5	0.3%	0.0%	0.0%	0.0%	0.0%	3.0%	3.0%	0.0%	1.9%	0.0%	0.0%	0.0%	4.5%	0.0%	0.4%	0.4%	22.7%	0.0%	28.0%	0.0%	35.7%
2002	1542	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	6.7%	3.6%	0.0%	1.1%	0.0%	0.0%	0.0%	3.6%	0.0%	0.6%	0.6%	11.0%	0.0%	41.1%	3.4%	28.3%
2003	1755	2,3,4,5	0.1%	0.0%	0.0%	0.0%	0.7%	5.3%	2.0%	0.0%	1.3%	0.0%	0.0%	0.0%	4.6%	0.0%	0.0%	0.4%	14.0%	0.0%	42.7%	1.9%	27.1%
2004	1875	2,3,4,5	0.0%	0.1%	0.0%	0.0%	0.0%	5.7%	1.3%	0.0%	1.5%	0.0%	0.0%	0.0%	7.1%	0.0%	0.6%	0.6%	11.3%	0.0%	33.0%	0.0%	38.7%
2005	1342	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	5.4%	2.2%	0.0%	5.7%	0.0%	0.3%	0.0%	4.1%	0.0%	1.9%	0.7%	11.4%	0.0%	11.1%	0.0%	57.2%
2006	3203	2,3,4,5	0.1%	0.0%	0.0%	0.0%	0.0%	6.0%	1.7%	0.0%	2.4%	0.0%	0.0%	0.0%	5.7%	0.0%	0.3%	0.8%	7.6%	0.0%	41.1%	0.0%	34.2%
2007	3316	2,3,4,5	0.0%	0.0%	0.0%	0.1%	0.0%	9.8%	1.5%	0.0%	1.0%	0.0%	0.0%	0.0%	4.9%	0.0%	0.4%	0.8%	13.3%	0.0%	35.9%	0.0%	32.4%
2008	1176	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.8%	3.4%	0.0%	4.9%	0.0%	0.0%	0.0%	1.7%	0.0%	0.4%	0.9%	14.2%	0.0%	48.0%	0.0%	21.7%
2009	1791	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	3.9%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	0.0%	0.1%	0.9%	13.0%	0.0%	43.0%	0.0%	35.0%
2010	1941	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.5%	1.8%	0.0%	0.2%	0.0%	0.0%	0.0%	4.1%	0.0%	0.4%	0.2%	1.6%	0.0%	41.2%	4.4%	41.7%
1979-2010	1208		0.0%	0.0%	0.0%	0.2%	0.2%	8.7%	2.2%	0.2%	4.3%	0.2%	1.2%	0.0%	4.5%	0.1%	0.3%	4.3%	20.2%	0.0%	28.3%	0.5%	24.5%
1979-1984	274		0.0%	0.0%	0.0%	0.8%	0.0%	21.7%	0.0%	0.8%	4.3%	0.0%	3.3%	0.0%	2.1%	0.0%	0.0%	12.0%	39.8%	0.0%	12.1%	0.0%	2.9%
1985-1995	774		0.0%	0.0%	0.0%	0.3%	0.3%	11.7%	2.3%	0.4%	7.1%	0.4%	2.2%	0.0%	6.6%	0.2%	0.2%	7.7%	22.1%	0.0%	20.8%	0.3%	17.4%
1996-1998	1104		0.1%	0.2%	0.0%	0.0%	0.3%	1.3%	2.0%	0.0%	2.3%	0.0%	0.4%	0.0%	0.9%	0.0%	0.3%	0.9%	24.8%	0.0%	31.9%	0.8%	33.6%
1999-2010	1788		0.0%	0.0%	0.0%	0.0%	0.1%	5.6%	2.5%	0.0%	2.3%	0.0%	0.0%	0.0%	3.9%	0.0%	0.6%	0.8%	14.0%	0.0%	37.0%	0.8%	32.3%

Appendix C.45. Percent distribution of Nooksack Spring Yearling (Nooksack Spring) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM														Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal				
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	23	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	214	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	185	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	191	2,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.9%	0.0%	4.7%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	84.8%
1987	523	3,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	537	2,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	116	2,3,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	13.8%	6.9%	0.0%	0.0%	0.0%	73.3%
1990	41	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.6%	0.0%	14.6%	0.0%	2.4%	0.0%	0.0%	4.9%	34.1%	0.0%	0.0%	0.0%	29.3%
1991	285	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	7.0%	0.0%	31.9%	0.0%	7.0%	0.0%	2.1%	0.0%	0.0%	7.0%	5.3%	0.0%	1.4%	0.0%	36.1%
1992	859	2,3,4,5	0.3%	0.3%	0.0%	0.0%	0.3%	17.5%	2.3%	1.3%	11.1%	0.9%	1.7%	0.0%	0.9%	0.0%	0.0%	0.3%	7.8%	0.0%	0.0%	0.0%	55.1%
1993	616	3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.4%	7.6%	2.3%	12.7%	0.0%	6.0%	0.0%	0.8%	0.0%	0.0%	5.4%	11.5%	0.0%	0.0%	0.0%	49.4%
1994	512	2,4,5	0.6%	0.0%	0.0%	0.0%	0.0%	5.1%	0.0%	6.1%	28.3%	0.0%	1.0%	0.0%	0.2%	0.0%	0.0%	6.3%	3.3%	0.0%	0.0%	0.0%	49.2%
1995	171	2,3,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	22.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	7.0%	0.0%	0.0%	0.0%	67.3%
1996	186	2,3,4	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	3.2%	0.0%	12.4%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	3.2%	0.0%	0.0%	0.0%	79.6%
1997	113	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	0.0%	14.2%	0.0%	2.7%	0.0%	0.0%	0.0%	0.0%	3.5%	15.9%	0.0%	0.0%	0.0%	58.4%
1998	114	2,3,4,5	0.0%	0.0%	0.0%	0.0%	3.5%	0.0%	6.1%	0.0%	15.8%	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%	1.8%	5.3%	0.0%	2.6%	0.0%	59.6%
1999	195	3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	1.0%	0.0%	23.6%	0.0%	0.0%	0.0%	2.6%	0.0%	0.0%	1.5%	1.0%	0.0%	3.1%	0.0%	64.6%
2000	148	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	31	5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1979-2010	283		0.1%	0.0%	0.0%	0.0%	0.4%	2.6%	2.7%	0.8%	16.9%	0.1%	3.6%	0.0%	0.8%	0.0%	0.0%	4.0%	8.6%	0.0%	0.6%	0.0%	58.9%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	349		0.1%	0.0%	0.0%	0.0%	0.0%	3.6%	2.1%	1.2%	17.0%	0.1%	4.4%	0.0%	0.8%	0.0%	0.0%	5.1%	9.7%	0.0%	0.2%	0.0%	55.5%
1996-1998	138		0.0%	0.0%	0.0%	0.0%	1.5%	0.0%	4.9%	0.0%	14.1%	0.0%	2.6%	0.0%	0.2%	0.0%	0.0%	1.8%	8.1%	0.0%	0.9%	0.0%	65.9%
1999-2010	195		0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	1.0%	0.0%	23.6%	0.0%	0.0%	0.0%	2.6%	0.0%	0.0%	1.5%	1.0%	0.0%	3.1%	0.0%	64.6%

Appendix C.46. Percent distribution of Nooksack Spring Yearling (Nooksack Spring) total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM														
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			Esc.
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	45	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	226	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	201	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	256	2,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	0.8%	2.3%	15.6%	0.4%	4.3%	0.0%	0.4%	0.0%	0.0%	7.4%	3.5%	0.0%	0.0%	0.0%	63.3%
1987	565	3,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	560	2,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	129	2,3,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.0%	9.3%	0.0%	0.8%	0.0%	65.9%
1990	87	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%	1.1%	0.0%	39.1%	1.1%	10.3%	0.0%	1.1%	0.0%	0.0%	2.3%	23.0%	0.0%	0.0%	0.0%	13.8%
1991	383	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	6.0%	0.0%	43.6%	0.0%	6.0%	0.0%	2.1%	0.0%	0.0%	5.7%	6.3%	0.0%	1.3%	0.0%	26.9%
1992	1034	2,3,4,5	1.6%	1.9%	0.0%	0.0%	0.3%	18.9%	2.2%	1.5%	14.3%	1.0%	1.6%	0.0%	1.0%	0.0%	0.0%	0.4%	9.5%	0.0%	0.0%	0.0%	45.7%
1993	670	3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.8%	7.6%	3.0%	15.5%	0.0%	5.7%	0.0%	0.7%	0.0%	0.0%	5.1%	12.2%	0.0%	0.0%	0.0%	45.4%
1994	539	2,4,5	0.6%	0.0%	0.0%	0.0%	0.0%	5.0%	0.0%	5.9%	30.6%	0.0%	1.1%	0.0%	0.2%	0.0%	0.0%	5.9%	3.9%	0.0%	0.0%	0.0%	46.8%
1995	195	2,3,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	26.7%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	3.1%	10.8%	0.0%	0.0%	0.0%	59.0%
1996	202	2,3,4	0.0%	0.0%	0.0%	0.0%	1.0%	0.5%	3.0%	0.0%	16.3%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	5.0%	0.0%	0.5%	0.0%	73.3%
1997	129	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.4%	0.0%	17.1%	0.0%	2.3%	0.0%	0.0%	0.0%	0.0%	3.1%	20.9%	0.0%	0.0%	0.0%	51.2%
1998	134	2,3,4,5	0.0%	0.0%	0.0%	0.0%	5.2%	0.0%	6.0%	0.0%	21.6%	0.0%	5.2%	0.0%	0.0%	0.0%	0.0%	1.5%	7.5%	0.0%	2.2%	0.0%	50.7%
1999	210	3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	1.4%	0.0%	27.1%	0.0%	0.0%	0.0%	2.9%	0.0%	0.0%	1.4%	1.9%	0.0%	2.9%	0.0%	60.0%
2000	154	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	31	5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1979-2010	331		0.2%	0.2%	0.0%	0.0%	0.5%	3.6%	2.8%	1.1%	23.1%	0.2%	3.1%	0.0%	0.7%	0.0%	0.0%	4.2%	9.5%	0.0%	0.6%	0.0%	50.2%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	412		0.3%	0.2%	0.0%	0.0%	0.0%	5.1%	2.2%	1.6%	24.4%	0.3%	3.7%	0.0%	0.7%	0.0%	0.0%	5.5%	9.8%	0.0%	0.3%	0.0%	45.8%
1996-1998	155		0.0%	0.0%	0.0%	0.0%	2.1%	0.2%	4.8%	0.0%	18.3%	0.0%	2.5%	0.0%	0.2%	0.0%	0.0%	1.5%	11.1%	0.0%	0.9%	0.0%	58.4%
1999-2010	210		0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	1.4%	0.0%	27.1%	0.0%	0.0%	0.0%	2.9%	0.0%	0.0%	1.4%	1.9%	0.0%	2.9%	0.0%	60.0%

Appendix C.47. Percent distribution of Nooksack Spring Fingerling (Nooksack Spring) reported catch among fisheries and escapement.

			AABM							ISBM													
Catch	Estimated # of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	4	2	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	127	2,3	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	458	3,4	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	359	4,5	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	45	2,5	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	358	2,3	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	949	2,3,4	1.4%	0.0%	0.0%	0.0%	1.2%	0.0%	4.0%	0.0%	17.0%	0.0%	4.8%	0.0%	0.7%	0.0%	0.0%	0.2%	6.4%	0.0%	0.1%	0.0%	64.2%
1997	1920	2,3,4,5	3.5%	0.2%	0.7%	0.2%	0.1%	1.8%	2.9%	0.0%	10.3%	0.1%	0.4%	0.0%	0.5%	0.0%	0.0%	0.5%	5.3%	0.0%	0.8%	0.0%	72.9%
1998	1476	2,3,4,5	8.1%	0.1%	0.0%	0.0%	0.0%	1.7%	3.2%	0.0%	3.0%	0.0%	0.1%	0.0%	0.2%	0.0%	0.0%	0.1%	0.6%	0.0%	0.0%	0.0%	82.9%
1999	1589	2,3,4,5	1.6%	0.1%	0.0%	0.0%	0.9%	2.2%	5.4%	0.0%	3.6%	0.0%	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	84.2%
2000	867	2,3,4,5	4.5%	0.2%	0.0%	0.0%	0.0%	20.5%	4.6%	0.0%	11.6%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.2%	0.3%	0.0%	0.0%	0.0%	57.7%
2001	1331	2,3,4,5	1.4%	0.0%	0.0%	0.0%	0.0%	10.1%	4.4%	0.0%	4.2%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.5%	0.7%	0.0%	0.3%	0.0%	77.3%
2002	1242	2,3,4,5	5.5%	0.0%	0.5%	0.8%	1.1%	17.6%	2.1%	0.0%	1.3%	0.0%	0.0%	0.0%	0.2%	0.0%	0.4%	0.2%	0.5%	0.0%	0.0%	0.0%	69.9%
2003	733	2,3,4,5	3.4%	0.0%	0.0%	0.0%	0.5%	13.6%	2.3%	0.0%	5.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	1.8%	0.0%	1.0%	0.0%	71.1%
2004	645	2,3,4,5	1.2%	0.0%	0.0%	0.3%	0.0%	31.9%	4.8%	0.0%	8.8%	0.0%	0.0%	0.0%	2.6%	0.0%	0.0%	0.0%	1.2%	0.0%	0.5%	0.0%	48.5%
2005	792	2,3,4,5	3.4%	0.1%	0.0%	0.3%	0.0%	32.4%	3.9%	0.0%	7.6%	0.0%	0.4%	0.0%	0.5%	0.0%	0.3%	0.0%	0.8%	0.0%	0.9%	0.0%	49.5%
2006	517	2,3,4,5	1.9%	0.0%	0.4%	1.2%	0.0%	32.3%	6.2%	0.0%	7.4%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.2%	2.7%	0.0%	2.3%	0.6%	43.7%
2007	524	2,3,4,5	5.3%	0.2%	0.4%	0.4%	0.0%	24.8%	9.2%	0.0%	7.1%	0.0%	0.2%	0.0%	0.4%	0.0%	0.0%	0.0%	3.1%	0.0%	0.8%	0.4%	47.9%
2008	969	2,3,4,5	1.0%	0.1%	0.0%	0.3%	0.0%	20.9%	12.9%	0.0%	13.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.4%	0.4%	5.6%	0.0%	2.6%	0.2%	41.4%
2009	740	2,3,4,5	3.0%	0.4%	0.0%	0.0%	0.0%	7.4%	10.1%	0.0%	11.9%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	2.8%	0.0%	1.5%	0.0%	62.2%
2010	778	2,3,4,5	3.0%	0.1%	0.0%	0.6%	1.3%	21.5%	9.0%	0.0%	1.5%	0.0%	0.0%	0.0%	2.2%	0.0%	0.4%	0.3%	3.2%	0.0%	0.5%	0.0%	56.4%
1979-2010	1005		3.2%	0.1%	0.1%	0.3%	0.3%	15.9%	5.7%	0.0%	7.6%	0.0%	0.4%	0.0%	0.9%	0.0%	0.1%	0.2%	2.4%	0.0%	0.7%	0.1%	62.0%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1996-1998	1448		4.3%	0.1%	0.2%	0.1%	0.4%	1.2%	3.4%	0.0%	10.1%	0.0%	1.8%	0.0%	0.5%	0.0%	0.0%	0.3%	4.1%	0.0%	0.3%	0.0%	73.3%
1999-2010	894		2.9%	0.1%	0.1%	0.3%	0.3%	19.6%	6.2%	0.0%	7.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.1%	0.2%	1.9%	0.0%	0.9%	0.1%	59.1%

Appendix C.48. Percent distribution of Nooksack Spring Fingerling (Nooksack Spring) total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			Esc.
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	11	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	194	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	511	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	367	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	67	2,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	494	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	1122	2,3,4	3.3%	0.0%	0.2%	0.0%	1.1%	1.1%	4.0%	0.0%	20.9%	0.0%	5.4%	0.0%	0.7%	0.0%	0.0%	0.2%	8.8%	0.0%	0.1%	0.0%	54.3%
1997	2049	2,3,4,5	4.0%	0.4%	0.8%	0.2%	0.1%	2.1%	2.9%	0.0%	11.7%	0.0%	1.3%	0.0%	0.5%	0.0%	0.0%	0.4%	6.3%	0.0%	0.8%	0.0%	68.3%
1998	1521	2,3,4,5	8.7%	0.2%	0.0%	0.0%	0.0%	1.8%	3.6%	0.0%	3.8%	0.0%	0.1%	0.0%	0.2%	0.0%	0.0%	0.1%	1.0%	0.0%	0.0%	0.0%	80.5%
1999	1645	2,3,4,5	2.0%	0.2%	0.0%	0.0%	1.1%	2.2%	5.8%	0.0%	4.7%	0.0%	0.0%	0.0%	1.5%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	81.3%
2000	945	2,3,4,5	5.1%	0.3%	0.0%	0.0%	0.0%	20.6%	5.1%	0.0%	15.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.2%	0.5%	0.0%	0.0%	0.0%	52.9%
2001	1388	2,3,4,5	1.9%	0.0%	0.0%	0.0%	0.0%	10.2%	5.1%	0.0%	5.4%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.5%	1.2%	0.0%	0.3%	0.0%	74.1%
2002	1283	2,3,4,5	6.2%	0.0%	0.5%	0.9%	1.6%	17.7%	2.4%	0.0%	1.5%	0.0%	0.0%	0.0%	0.2%	0.0%	0.5%	0.2%	0.6%	0.0%	0.0%	0.0%	67.7%
2003	786	2,3,4,5	3.7%	0.0%	0.0%	0.0%	0.8%	14.0%	3.2%	0.0%	7.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	2.9%	0.0%	0.9%	0.0%	66.3%
2004	693	2,3,4,5	1.6%	0.0%	0.0%	0.3%	0.0%	31.2%	5.5%	0.0%	11.3%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	1.6%	0.0%	0.4%	0.0%	45.2%
2005	841	2,3,4,5	3.8%	0.2%	0.0%	0.2%	0.0%	32.7%	4.5%	0.0%	8.9%	0.0%	0.5%	0.0%	0.5%	0.0%	0.2%	0.0%	1.0%	0.0%	0.8%	0.0%	46.6%
2006	567	2,3,4,5	2.3%	0.0%	0.5%	1.2%	0.0%	31.6%	6.9%	0.0%	9.7%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.2%	3.5%	0.0%	2.3%	0.7%	39.9%
2007	608	2,3,4,5	5.4%	0.3%	0.5%	0.3%	0.0%	24.5%	9.7%	0.0%	11.3%	0.0%	0.2%	0.0%	0.3%	0.0%	0.0%	0.0%	5.1%	0.0%	0.7%	0.3%	41.3%
2008	1078	2,3,4,5	1.4%	0.2%	0.0%	0.4%	0.0%	19.7%	13.6%	0.0%	16.0%	0.0%	0.0%	0.0%	1.3%	0.0%	0.5%	0.4%	6.7%	0.0%	2.5%	0.2%	37.2%
2009	855	2,3,4,5	3.3%	0.4%	0.0%	0.0%	0.0%	7.3%	11.2%	0.0%	17.3%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	4.6%	0.0%	1.4%	0.0%	53.8%
2010	844	2,3,4,5	3.7%	0.4%	0.0%	0.8%	1.7%	21.1%	10.7%	0.0%	2.0%	0.0%	0.0%	0.0%	2.5%	0.0%	0.5%	0.2%	4.0%	0.0%	0.5%	0.0%	52.0%
1979-2010	1082		3.8%	0.2%	0.2%	0.3%	0.4%	15.8%	6.3%	0.0%	9.8%	0.0%	0.5%	0.0%	0.9%	0.0%	0.1%	0.2%	3.3%	0.0%	0.7%	0.1%	57.4%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1996-1998	1564		5.3%	0.2%	0.3%	0.1%	0.4%	1.6%	3.5%	0.0%	12.1%	0.0%	2.3%	0.0%	0.5%	0.0%	0.0%	0.2%	5.4%	0.0%	0.3%	0.0%	67.7%
1999-2010	961		3.4%	0.2%	0.1%	0.4%	0.4%	19.4%	7.0%	0.0%	9.3%	0.0%	0.1%	0.0%	1.1%	0.0%	0.1%	0.2%	2.7%	0.0%	0.8%	0.1%	54.9%

Appendix C.49. Percent distribution of Puntledge River Summer (Lower Strait of Georgia Hatchery) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	1470	2,3,4	1.5%	0.3%	0.2%	2.6%	0.3%	0.7%	0.0%	19.9%	16.9%	8.0%	12.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	37.0%
1980	760	2,3,4,5	2.2%	0.0%	0.4%	2.0%	1.3%	5.3%	0.0%	16.2%	23.2%	5.8%	10.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.6%
1981	506	2,3,4,5	0.8%	0.0%	0.0%	4.5%	4.0%	0.0%	0.0%	21.9%	37.5%	7.3%	8.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.0%
1982	506	2,3,4,5	0.8%	0.4%	0.0%	3.8%	1.2%	1.8%	0.0%	5.5%	16.2%	14.4%	22.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.4%
1983	487	2,3,4,5	1.0%	0.2%	0.0%	7.8%	3.1%	2.5%	0.0%	12.5%	13.3%	16.2%	8.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	35.3%
1984	300	2,3,4,5	0.0%	1.0%	0.0%	2.0%	1.0%	2.0%	0.0%	5.3%	17.7%	5.0%	5.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	60.3%
1985	131	2,3,4,5	9.2%	0.8%	2.3%	6.1%	6.1%	0.0%	0.0%	0.0%	32.8%	1.5%	14.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	26.7%
1986	180	2,3,4,5	5.6%	0.0%	4.4%	2.8%	0.0%	2.8%	0.0%	10.6%	32.2%	3.9%	11.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	26.1%
1987	148	2,3,4,5	2.7%	0.7%	0.0%	12.2%	10.1%	0.0%	4.7%	0.0%	16.9%	2.0%	6.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	43.9%
1988	92	2,3,4,5	12.0%	0.0%	0.0%	0.0%	14.1%	0.0%	0.0%	0.0%	17.4%	0.0%	5.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	51.1%
1989	62	2,3,4,5	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	48.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	48.4%
1990	96	2,3,4,5	8.3%	0.0%	0.0%	0.0%	4.2%	0.0%	0.0%	0.0%	8.3%	3.1%	14.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	61.5%
1991	96	2,3,4,5	6.3%	4.2%	0.0%	0.0%	10.4%	0.0%	0.0%	0.0%	27.1%	0.0%	11.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	40.6%
1992	87	2,3,4,5	0.0%	0.0%	0.0%	0.0%	3.4%	0.0%	0.0%	3.4%	33.3%	0.0%	21.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	37.9%
1993	69	2,3,4,5	0.0%	0.0%	0.0%	0.0%	10.1%	0.0%	0.0%	0.0%	49.3%	0.0%	7.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.3%
1994	28	2,3,4,5	7.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	53.6%	0.0%	10.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	28.6%
1995	36	2,3,4,5	5.6%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	30.6%	0.0%	13.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	47.2%
1996	45	2,3,4,5	0.0%	0.0%	0.0%	0.0%	6.7%	0.0%	0.0%	0.0%	28.9%	0.0%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	62.2%
1997	26	3,4,5	0.0%	0.0%	0.0%	0.0%	7.7%	0.0%	0.0%	0.0%	7.7%	0.0%	3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	80.8%
1998	8	2,4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1999	48	2,3,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.4%	0.0%	6.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	83.3%
2000	61	2,3,4	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	88.5%
2001	212	2,3,4,5	2.8%	0.5%	0.0%	0.0%	0.9%	2.4%	0.0%	0.0%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	90.6%
2002	112	2,3,4,5	4.5%	0.0%	0.0%	0.0%	8.9%	0.0%	9.8%	0.0%	3.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	73.2%
2003	108	2,3,4,5	0.0%	0.0%	0.0%	0.0%	9.3%	0.0%	0.0%	0.0%	4.6%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	85.2%
2004	98	2,3,4,5	14.3%	1.0%	0.0%	0.0%	0.0%	3.1%	0.0%	0.0%	8.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	73.5%
2005	306	2,3,4,5	1.6%	0.0%	0.0%	1.3%	9.2%	0.7%	0.0%	0.0%	11.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	75.5%
2006	205	2,3,4,5	7.3%	1.5%	0.0%	1.0%	2.9%	0.0%	2.0%	0.0%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	82.9%
2007	161	2,3,4,5	19.9%	6.8%	1.9%	1.2%	5.6%	0.0%	0.0%	0.0%	1.9%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	62.1%
2008	114	2,3,4,5	1.8%	1.8%	0.0%	0.0%	6.1%	0.0%	9.6%	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	64.0%
2009	571	2,3,4,5	4.6%	1.4%	0.2%	0.9%	4.2%	0.0%	0.0%	0.0%	7.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	81.6%
2010	461	2,3,4,5	6.1%	0.7%	0.0%	0.0%	8.7%	1.7%	0.9%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	77.0%
1979-2010	245		4.2%	0.8%	0.3%	1.6%	4.5%	0.7%	0.9%	3.1%	19.2%	2.2%	6.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	56.1%
1979-1984	672		1.1%	0.3%	0.1%	3.8%	1.8%	2.0%	0.0%	13.6%	20.8%	9.5%	11.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	35.8%
1985-1995	93		5.4%	0.8%	0.6%	1.9%	5.3%	0.3%	0.4%	1.3%	31.8%	1.0%	10.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	40.5%
1996-1998	36		0.0%	0.0%	0.0%	0.0%	7.2%	0.0%	0.0%	0.0%	18.3%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	71.5%
1999-2010	205		5.2%	1.3%	0.2%	0.4%	4.7%	0.7%	1.9%	0.0%	7.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	78.1%

Appendix C.50. Percent distribution of Puntledge River Summer (Lower Strait of Georgia Hatchery) total fishing mortalities among fisheries and escapement.

	Estimated		AABM							ISBM													
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	1539	2,3,4	1.9%	0.3%	0.3%	2.7%	0.4%	1.0%	0.0%	19.8%	17.2%	8.6%	12.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	35.3%
1980	815	2,3,4,5	2.6%	0.0%	0.5%	2.2%	1.5%	5.8%	0.0%	16.3%	23.1%	6.4%	10.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	31.3%
1981	541	2,3,4,5	0.9%	0.0%	0.0%	5.0%	4.3%	0.0%	0.0%	21.6%	37.5%	7.9%	8.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.0%
1982	561	2,3,4,5	1.1%	0.5%	0.0%	4.1%	1.6%	2.1%	0.0%	5.7%	15.7%	16.0%	23.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	30.1%
1983	531	2,3,4,5	2.1%	0.2%	0.0%	8.5%	3.0%	2.6%	0.0%	12.6%	13.4%	17.3%	7.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	32.4%
1984	317	2,3,4,5	0.0%	0.9%	0.0%	2.2%	1.3%	2.2%	0.0%	5.7%	18.9%	5.7%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	57.1%
1985	156	2,3,4,5	13.5%	1.3%	3.8%	6.4%	6.4%	0.0%	0.0%	0.0%	31.4%	1.3%	13.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	22.4%
1986	204	2,3,4,5	5.9%	0.0%	5.4%	2.9%	0.0%	2.9%	0.0%	12.3%	31.9%	4.4%	11.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	23.0%
1987	162	2,3,4,5	3.1%	1.2%	0.0%	15.4%	10.5%	0.0%	4.3%	0.0%	16.7%	2.5%	6.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	40.1%
1988	108	2,3,4,5	11.1%	0.0%	0.0%	0.0%	14.8%	0.0%	0.0%	0.0%	25.0%	0.0%	5.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	43.5%
1989	75	2,3,4,5	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	57.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	40.0%
1990	103	2,3,4,5	9.7%	0.0%	0.0%	0.0%	3.9%	0.0%	0.0%	0.0%	9.7%	3.9%	15.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	57.3%
1991	131	2,3,4,5	6.1%	7.6%	0.0%	0.0%	9.9%	0.0%	0.0%	0.0%	36.6%	0.0%	9.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	29.8%
1992	103	2,3,4,5	0.0%	0.0%	0.0%	0.0%	3.9%	0.0%	0.0%	3.9%	40.8%	0.0%	19.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	32.0%
1993	82	2,3,4,5	0.0%	0.0%	0.0%	0.0%	9.8%	0.0%	0.0%	0.0%	56.1%	0.0%	6.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	28.0%
1994	34	2,3,4,5	8.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	58.8%	0.0%	8.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	23.5%
1995	58	2,3,4,5	3.4%	5.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	12.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	29.3%
1996	51	2,3,4,5	0.0%	0.0%	0.0%	0.0%	5.9%	0.0%	0.0%	0.0%	37.3%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	54.9%
1997	27	3,4,5	0.0%	0.0%	0.0%	0.0%	11.1%	0.0%	0.0%	0.0%	7.4%	0.0%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	77.8%
1998	12	2,4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1999	53	2,3,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	0.0%	15.1%	0.0%	7.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	75.5%
2000	64	2,3,4	1.6%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	84.4%
2001	215	2,3,4,5	3.3%	0.5%	0.0%	0.0%	1.4%	2.3%	0.0%	0.0%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	89.3%
2002	126	2,3,4,5	5.6%	0.0%	0.0%	0.0%	12.7%	0.0%	11.9%	0.0%	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	65.1%
2003	116	2,3,4,5	0.0%	0.0%	0.0%	0.0%	12.9%	0.0%	0.0%	0.0%	6.9%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	79.3%
2004	108	2,3,4,5	16.7%	0.9%	0.0%	0.0%	0.0%	2.8%	0.0%	0.0%	13.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	66.7%
2005	339	2,3,4,5	1.8%	0.0%	0.0%	1.5%	12.4%	0.6%	0.0%	0.0%	15.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	68.1%
2006	227	2,3,4,5	10.6%	3.1%	0.0%	1.3%	4.0%	0.0%	2.2%	0.0%	4.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	74.9%
2007	214	2,3,4,5	21.5%	16.8%	2.8%	1.4%	8.4%	0.0%	0.0%	0.0%	1.9%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	46.7%
2008	135	2,3,4,5	3.0%	2.2%	0.0%	0.0%	7.4%	0.0%	10.4%	0.0%	23.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	54.1%
2009	623	2,3,4,5	5.5%	1.6%	0.2%	1.1%	5.6%	0.0%	0.0%	0.0%	11.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	74.8%
2010	495	2,3,4,5	7.5%	1.0%	0.0%	0.0%	10.9%	1.6%	1.0%	0.0%	6.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	71.7%
1979-2010	268		4.8%	1.4%	0.4%	1.8%	5.3%	0.8%	1.0%	3.2%	22.7%	2.4%	6.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.1%
1979-1984	717		1.4%	0.3%	0.1%	4.1%	2.0%	2.3%	0.0%	13.6%	21.0%	10.3%	11.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.4%
1985-1995	111		5.8%	1.4%	0.8%	2.3%	5.4%	0.3%	0.4%	1.5%	37.7%	1.1%	9.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.6%
1996-1998	39		0.0%	0.0%	0.0%	0.0%	8.5%	0.0%	0.0%	0.0%	22.3%	0.0%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	66.3%
1999-2010	226		6.4%	2.3%	0.2%	0.4%	6.3%	0.6%	2.3%	0.0%	9.8%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	70.9%

Appendix C.51. Percent distribution of Queets Fall Fingerling (Washington Coastal Wild) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	3	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	94	2,3,4	9.6%	0.0%	0.0%	13.8%	0.0%	11.7%	0.0%	0.0%	0.0%	2.1%	2.1%	0.0%	1.1%	0.0%	0.0%	0.0%	3.2%	0.0%	31.9%	0.0%	24.5%
1982	226	2,3,4,5	13.3%	1.8%	0.0%	17.7%	1.3%	13.3%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	27.4%	0.0%	24.8%
1983	141	2,3,4,5,6	27.7%	0.0%	0.0%	16.3%	0.0%	7.1%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	0.7%	0.0%	0.0%	1.4%	0.0%	0.0%	22.7%	0.0%	21.3%
1984	138	2,3,4,5,6	16.7%	0.7%	0.0%	17.4%	1.4%	8.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	29.7%	0.0%	23.9%
1985	244	2,3,4,5,6	16.0%	0.0%	0.0%	29.9%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	14.8%	0.0%	34.4%
1986	283	3,4,5,6	17.3%	0.0%	1.1%	11.7%	0.0%	7.1%	0.0%	0.0%	0.0%	1.8%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.5%	0.0%	50.5%
1987	543	2,4,5,6	22.1%	1.1%	0.0%	11.6%	0.9%	0.7%	0.0%	0.0%	0.0%	0.9%	0.6%	0.0%	0.6%	0.0%	0.0%	0.2%	0.6%	0.0%	22.5%	0.0%	38.3%
1988	726	2,3,5,6	14.5%	0.7%	1.7%	7.9%	0.0%	4.0%	1.1%	0.0%	0.0%	2.5%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%	0.0%	16.7%	0.0%	47.4%
1989	569	2,3,4,6	11.1%	0.0%	0.0%	9.1%	1.1%	7.6%	0.0%	0.0%	0.0%	0.5%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	27.8%	0.0%	41.1%
1990	1275	2,3,4,5	12.5%	0.3%	0.0%	5.4%	2.4%	6.6%	0.0%	0.0%	0.0%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	13.7%	0.0%	58.4%
1991	1102	2,3,4,5,6	20.5%	0.2%	1.1%	9.7%	1.3%	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	15.7%	0.0%	46.3%
1992	632	2,3,4,5,6	8.4%	0.9%	2.2%	7.8%	1.9%	16.9%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	19.3%	0.0%	41.6%
1993	619	2,3,4,5,6	15.3%	1.0%	0.6%	13.9%	2.1%	12.4%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.5%	0.0%	1.9%	0.0%	0.8%	0.0%	15.8%	0.0%	35.2%
1994	1050	2,3,4,5,6	16.2%	0.4%	0.5%	21.7%	1.4%	4.1%	1.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	21.4%	0.0%	32.4%
1995	746	2,3,4,5,6	17.3%	0.0%	1.6%	6.0%	3.4%	0.7%	0.4%	0.0%	0.3%	0.0%	0.1%	0.0%	0.7%	0.0%	0.0%	0.3%	0.0%	0.0%	33.1%	0.0%	36.2%
1996	714	2,3,4,5,6	10.4%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.5%	0.6%	70.2%
1997	904	2,3,4,5,6	34.4%	0.4%	0.0%	6.1%	0.0%	0.2%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.8%	0.0%	37.3%
1998	638	2,3,4,5,6	23.8%	0.0%	3.0%	19.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	12.1%	4.4%	37.0%
1999	738	2,3,4,5,6	9.1%	0.0%	1.4%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	8.8%	0.0%	78.0%
2000	433	2,3,4,5,6	22.6%	0.0%	9.5%	12.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.9%	0.0%	51.3%
2001	445	2,3,4,5,6	23.1%	0.0%	5.8%	4.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.7%	0.0%	0.0%	0.0%	42.0%	0.0%	22.5%
2002	1632	2,3,4,5,6	25.4%	0.0%	3.3%	4.8%	2.4%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	24.9%	0.0%	38.7%
2003	1447	2,3,4,5,6	20.8%	0.1%	3.6%	10.6%	4.8%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	21.4%	0.0%	37.7%
2004	2552	2,3,4,5,6	15.2%	0.6%	3.1%	6.7%	6.5%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	11.8%	0.0%	54.0%
2005	2523	2,3,4,5,6	14.5%	0.0%	3.3%	6.8%	2.6%	3.6%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.1%	0.0%	0.5%	0.0%	0.0%	0.0%	19.9%	0.0%	48.4%
2006	1074	2,3,4,5,6	23.6%	0.2%	2.6%	13.1%	3.3%	4.1%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.2%	0.0%	0.0%	0.0%	17.3%	0.0%	34.5%
2007	599	2,3,4,5,6	28.5%	0.0%	3.8%	11.2%	13.9%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	0.3%	0.2%	0.0%	0.0%	0.0%	16.4%	0.0%	23.0%
2008	1003	2,3,4,5,6	13.3%	0.0%	1.2%	7.2%	4.4%	0.8%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	21.4%	0.0%	50.7%
2009	1570	3,4,5,6	22.3%	1.1%	2.9%	8.9%	2.9%	0.1%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.8%	0.0%	44.0%
2010	1585	4,5,6	25.7%	0.0%	6.0%	5.6%	5.8%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.3%	0.0%	0.0%	0.0%	17.2%	0.0%	38.5%
1979-2010	875		18.4%	0.3%	2.0%	10.7%	2.1%	4.0%	0.2%	0.0%	0.0%	0.3%	0.3%	0.0%	0.3%	0.0%	0.2%	0.1%	0.4%	0.0%	19.8%	0.2%	40.7%
1979-1984	150		16.8%	0.6%	0.0%	16.3%	0.7%	10.2%	0.0%	0.0%	0.0%	0.5%	1.4%	0.0%	0.8%	0.0%	0.0%	0.4%	0.8%	0.0%	27.9%	0.0%	23.6%
1985-1995	708		15.6%	0.4%	0.8%	12.2%	1.3%	6.1%	0.2%	0.0%	0.1%	0.6%	0.4%	0.0%	0.2%	0.0%	0.2%	0.0%	0.7%	0.0%	19.1%	0.0%	42.0%
1996-1998	752		22.9%	0.1%	1.5%	8.3%	0.0%	0.1%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	16.8%	1.6%	48.1%
1999-2010	1300		20.3%	0.2%	3.9%	7.9%	3.9%	0.9%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.3%	0.0%	0.0%	0.0%	18.5%	0.0%	43.4%

Appendix C.52. Percent distribution of Queets Fall Fingerling (Washington Coastal Wild) total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	2	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	14	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	110	2,3,4	12.7%	0.0%	0.0%	16.4%	0.0%	11.8%	0.0%	0.0%	0.0%	1.8%	2.7%	0.0%	1.8%	0.0%	0.0%	0.0%	3.6%	0.0%	28.2%	0.0%	20.9%
1982	241	2,3,4,5	15.4%	1.7%	0.0%	18.7%	1.2%	12.9%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	26.1%	0.0%	23.2%
1983	196	2,3,4,5,6	45.4%	0.0%	0.0%	13.3%	0.0%	5.1%	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	0.5%	0.0%	0.0%	1.5%	0.0%	0.0%	16.8%	0.0%	15.3%
1984	149	2,3,4,5,6	16.8%	0.7%	0.0%	20.1%	2.0%	8.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	28.2%	0.0%	22.1%
1985	286	2,3,4,5,6	20.3%	0.0%	0.0%	32.2%	0.0%	2.1%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	0.0%	12.9%	0.0%	29.4%
1986	329	3,4,5,6	25.5%	0.0%	1.2%	11.2%	0.0%	7.0%	0.0%	0.0%	0.0%	1.5%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%	0.0%	43.5%
1987	618	2,4,5,6	28.0%	1.8%	0.0%	11.5%	1.0%	1.5%	0.0%	0.0%	0.0%	0.8%	0.5%	0.0%	0.5%	0.0%	0.0%	0.2%	0.8%	0.0%	19.9%	0.0%	33.7%
1988	821	2,3,5,6	18.0%	1.7%	1.6%	9.0%	0.2%	5.4%	1.0%	0.0%	0.0%	2.3%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	3.4%	0.0%	15.1%	0.0%	41.9%
1989	662	2,3,4,6	16.9%	0.3%	0.2%	10.4%	1.1%	8.9%	0.0%	0.0%	0.0%	0.6%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	0.0%	24.3%	0.0%	35.3%
1990	1362	2,3,4,5	15.1%	0.7%	0.1%	6.1%	2.4%	7.0%	0.0%	0.0%	0.0%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	13.2%	0.0%	54.7%
1991	1200	2,3,4,5,6	24.4%	0.3%	1.2%	10.0%	1.4%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	14.7%	0.0%	42.5%
1992	774	2,3,4,5,6	13.8%	5.8%	2.3%	8.1%	1.8%	17.2%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	16.0%	0.0%	34.0%
1993	712	2,3,4,5,6	19.0%	2.2%	0.7%	14.6%	2.0%	13.3%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.4%	0.0%	1.8%	0.0%	1.0%	0.0%	14.0%	0.0%	30.6%
1994	1217	2,3,4,5,6	23.6%	1.3%	0.4%	21.0%	1.4%	4.0%	1.0%	0.0%	0.2%	0.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	18.7%	0.0%	27.9%
1995	829	2,3,4,5,6	22.1%	0.0%	1.8%	6.8%	4.1%	0.7%	0.4%	0.0%	0.2%	0.0%	0.2%	0.0%	0.7%	0.0%	0.0%	0.4%	0.0%	0.0%	30.0%	0.0%	32.6%
1996	805	2,3,4,5,6	18.1%	0.0%	1.5%	1.1%	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.9%	0.5%	62.2%
1997	973	2,3,4,5,6	38.1%	0.6%	0.0%	6.2%	0.0%	0.2%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	19.5%	0.0%	34.6%
1998	676	2,3,4,5,6	25.4%	0.0%	3.1%	19.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	11.5%	4.4%	34.9%
1999	787	2,3,4,5,6	13.5%	0.0%	1.8%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	8.6%	0.0%	73.2%
2000	500	2,3,4,5,6	26.6%	0.0%	12.0%	13.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.6%	0.0%	44.4%
2001	501	2,3,4,5,6	28.3%	0.0%	6.8%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.6%	0.0%	0.0%	0.0%	38.1%	0.0%	20.0%
2002	1788	2,3,4,5,6	29.3%	0.0%	3.6%	5.1%	3.1%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	23.1%	0.0%	35.3%
2003	1582	2,3,4,5,6	22.8%	0.1%	3.9%	11.4%	6.4%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	19.8%	0.0%	34.5%
2004	2787	2,3,4,5,6	17.2%	1.0%	3.2%	7.2%	9.0%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	11.1%	0.0%	49.4%
2005	2627	2,3,4,5,6	15.6%	0.0%	3.5%	7.2%	3.3%	3.5%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.1%	0.0%	0.5%	0.0%	0.0%	0.0%	19.4%	0.0%	46.5%
2006	1170	2,3,4,5,6	26.2%	0.2%	2.9%	13.6%	4.0%	4.1%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.2%	0.0%	0.0%	0.0%	16.1%	0.0%	31.6%
2007	718	2,3,4,5,6	32.0%	0.0%	4.3%	11.1%	16.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	0.3%	0.1%	0.0%	0.0%	0.0%	14.1%	0.0%	19.2%
2008	1089	2,3,4,5,6	16.9%	0.0%	1.4%	7.9%	5.1%	0.7%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.2%	0.0%	46.7%
2009	1681	3,4,5,6	25.5%	1.1%	3.0%	8.9%	3.2%	0.1%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.0%	0.0%	41.1%
2010	1698	4,5,6	28.4%	0.0%	5.8%	5.4%	6.8%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.3%	0.0%	0.0%	0.0%	16.2%	0.0%	35.9%
1979-2010	963		22.7%	0.6%	2.2%	11.2%	2.5%	4.0%	0.2%	0.0%	0.0%	0.3%	0.3%	0.0%	0.4%	0.0%	0.2%	0.1%	0.4%	0.0%	18.0%	0.2%	36.6%
1979-1984	174		22.6%	0.6%	0.0%	17.1%	0.8%	9.5%	0.0%	0.0%	0.0%	0.5%	1.3%	0.0%	1.1%	0.0%	0.0%	0.5%	0.9%	0.0%	24.8%	0.0%	20.4%
1985-1995	801		20.6%	1.3%	0.9%	12.8%	1.4%	6.6%	0.2%	0.0%	0.0%	0.5%	0.4%	0.0%	0.1%	0.0%	0.2%	0.0%	0.8%	0.0%	17.1%	0.0%	36.9%
1996-1998	818		27.2%	0.2%	1.5%	9.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	15.7%	1.6%	43.9%
1999-2010	1411		23.5%	0.2%	4.3%	8.2%	4.8%	0.9%	0.4%	0.0%	0.1%	0.0%	0.0%	0.0%	0.4%	0.0%	0.3%	0.0%	0.0%	0.0%	17.2%	0.0%	39.8%

Appendix C.53. Percent distribution of Quinsam River Fall (Upper Strait of Georgia) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	1548	2,3,4,5	4.7%	4.5%	0.7%	5.4%	3.0%	0.0%	0.0%	2.5%	4.2%	10.1%	23.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	41.7%
1980	1561	2,3,4,5,6	14.6%	4.9%	2.9%	10.3%	5.3%	0.0%	0.0%	1.5%	5.1%	16.2%	21.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.6%
1981	1594	2,3,4,5,6	10.9%	4.1%	1.6%	12.7%	5.5%	0.6%	0.0%	2.1%	9.8%	12.1%	16.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	23.5%
1982	1119	2,3,4,5,6	16.3%	6.6%	5.0%	8.3%	2.2%	0.4%	0.0%	0.0%	3.8%	6.3%	26.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	24.3%
1983	1139	2,3,4,5,6	21.2%	1.3%	0.3%	14.5%	2.7%	0.7%	0.0%	0.3%	4.5%	11.5%	25.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.6%
1984	1169	2,3,4,5,6	14.3%	4.9%	5.0%	6.3%	4.0%	0.9%	0.0%	0.9%	6.8%	5.0%	21.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	30.5%
1985	1564	2,3,4,5,6	25.9%	5.0%	4.3%	5.1%	1.0%	0.1%	0.0%	0.0%	4.2%	3.6%	19.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	31.1%
1986	1555	2,3,4,5,6	13.8%	4.1%	2.8%	6.6%	2.9%	0.0%	0.0%	0.1%	6.1%	7.3%	26.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	30.0%
1987	1317	2,3,4,5,6	10.6%	3.5%	2.8%	6.3%	6.5%	0.4%	0.4%	0.2%	3.9%	6.1%	24.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	34.9%
1988	1556	2,3,4,5,6	18.6%	2.4%	1.2%	6.4%	2.8%	0.7%	0.9%	0.2%	3.5%	2.4%	9.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	51.4%
1989	1657	2,3,4,5,6	12.6%	2.5%	2.8%	3.9%	3.2%	0.3%	0.0%	0.0%	7.4%	1.9%	18.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	47.4%
1990	1144	2,3,4,5,6	15.9%	2.3%	0.5%	6.1%	8.7%	1.3%	0.0%	1.6%	1.7%	4.5%	14.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	42.7%
1991	756	2,3,4,5,6	10.3%	2.2%	1.5%	6.0%	11.5%	0.5%	0.8%	0.7%	4.0%	9.5%	14.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	38.6%
1992	598	2,3,4,5,6	12.0%	0.5%	2.5%	10.5%	6.4%	0.3%	0.0%	0.3%	3.3%	9.7%	10.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	44.0%
1993	332	2,3,4,5,6	7.8%	3.3%	1.2%	5.7%	7.8%	1.2%	0.0%	0.6%	9.9%	5.7%	22.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.7%
1994	351	2,3,4,5,6	4.6%	20.5%	3.4%	8.0%	2.8%	0.0%	0.0%	0.0%	5.1%	1.1%	15.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	39.0%
1995	235	2,3,4,5,6	7.2%	5.1%	0.0%	9.4%	6.4%	0.0%	0.0%	0.0%	6.8%	0.0%	15.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	49.4%
1996	261	2,3,4,5,6	6.5%	0.8%	0.0%	0.0%	4.2%	0.0%	0.0%	0.0%	6.1%	0.0%	16.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	65.9%
1997	420	2,3,4,5,6	9.3%	2.9%	2.6%	4.0%	6.7%	0.7%	5.2%	0.0%	9.0%	3.6%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	53.6%
1998	549	2,3,4,5,6	14.0%	2.0%	2.0%	0.0%	8.0%	0.0%	0.0%	0.0%	5.5%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	67.9%
1999	895	2,3,4,5,6	7.9%	2.5%	3.9%	2.0%	18.1%	0.0%	0.0%	0.0%	1.5%	0.3%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	62.5%
2000	780	2,3,4,5,6	12.8%	2.2%	4.9%	0.4%	5.0%	0.0%	0.0%	0.0%	2.8%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	71.3%
2001	1217	2,3,4,5,6	9.7%	1.6%	1.8%	0.1%	4.3%	0.0%	0.0%	0.0%	1.7%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	80.8%
2002	882	2,3,4,5,6	14.9%	2.7%	0.9%	0.6%	11.2%	0.0%	0.0%	0.0%	2.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	67.3%
2003	481	2,3,4,5,6	17.7%	1.7%	0.8%	0.0%	20.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	59.5%
2004	705	2,3,4,5,6	8.8%	13.2%	1.7%	0.3%	14.6%	0.0%	0.0%	0.0%	0.7%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	59.7%
2005	858	2,3,4,5,6	17.2%	2.3%	2.8%	0.3%	14.7%	0.0%	0.0%	0.0%	1.3%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	60.3%
2006	788	2,3,4,5,6	16.1%	4.3%	1.1%	0.8%	7.7%	0.0%	0.8%	0.0%	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	65.0%
2007	566	2,3,4,5,6	19.8%	2.8%	1.1%	3.2%	12.5%	0.0%	0.0%	0.0%	6.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	53.9%
2008	390	2,3,4,5,6	10.5%	1.5%	0.3%	0.8%	7.7%	0.0%	0.0%	0.0%	3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	75.4%
2009	398	2,3,4,5,6	11.3%	4.0%	2.0%	0.8%	10.3%	0.0%	1.5%	0.0%	8.0%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	60.6%
2010	572	2,3,4,5,6	4.9%	3.5%	0.5%	0.0%	12.6%	0.0%	0.0%	0.0%	6.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	71.3%
1979-2010	905		12.6%	3.9%	2.0%	4.5%	7.5%	0.3%	0.3%	0.3%	4.7%	3.7%	11.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	49.1%
1979-1984	1355		13.7%	4.4%	2.6%	9.6%	3.8%	0.4%	0.0%	1.2%	5.7%	10.2%	22.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.9%
1985-1995	1006		12.7%	4.7%	2.1%	6.7%	5.5%	0.4%	0.2%	0.3%	5.1%	4.7%	17.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	40.2%
1996-1998	410		9.9%	1.9%	1.5%	1.3%	6.3%	0.2%	1.7%	0.0%	6.9%	1.2%	6.3%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	62.5%
1999-2010	711		12.6%	3.5%	1.8%	0.8%	11.6%	0.0%	0.2%	0.0%	3.3%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	65.6%

Appendix C.54. Percent distribution of Quinsam River Fall (Upper Strait of Georgia) total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			Esc.
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	1686	2,3,4,5	6.5%	4.4%	1.1%	6.2%	3.3%	0.1%	0.0%	2.4%	4.2%	10.9%	22.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	38.3%
1980	1703	2,3,4,5,6	15.3%	4.8%	3.2%	10.5%	5.6%	0.0%	0.0%	1.5%	5.0%	16.6%	21.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.1%
1981	1707	2,3,4,5,6	11.7%	4.1%	1.8%	13.1%	5.7%	0.6%	0.0%	2.1%	9.8%	12.4%	16.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	22.0%
1982	1263	2,3,4,5,6	19.3%	6.6%	5.5%	8.5%	2.3%	0.3%	0.0%	0.0%	3.6%	6.4%	26.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	21.5%
1983	1332	2,3,4,5,6	25.3%	1.2%	0.3%	14.4%	2.9%	0.7%	0.0%	0.2%	4.4%	11.5%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.0%
1984	1277	2,3,4,5,6	17.0%	4.7%	5.6%	6.5%	4.1%	0.9%	0.0%	0.9%	6.7%	5.0%	20.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	28.0%
1985	1807	2,3,4,5,6	28.1%	9.3%	4.3%	4.9%	1.0%	0.1%	0.0%	0.0%	3.9%	3.4%	17.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	27.0%
1986	1913	2,3,4,5,6	15.2%	10.1%	3.1%	6.6%	3.0%	0.0%	0.0%	0.2%	5.7%	7.3%	24.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	24.4%
1987	1615	2,3,4,5,6	15.3%	8.6%	2.8%	6.8%	5.8%	0.4%	0.3%	0.2%	3.4%	6.7%	21.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	28.5%
1988	1706	2,3,4,5,6	19.5%	4.9%	1.3%	6.7%	3.0%	0.8%	0.9%	0.2%	4.0%	2.5%	9.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	46.9%
1989	1914	2,3,4,5,6	13.4%	9.2%	2.8%	4.0%	3.1%	0.3%	0.0%	0.0%	7.8%	1.9%	16.3%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	41.0%
1990	1292	2,3,4,5,6	17.2%	5.5%	0.5%	6.6%	8.8%	1.4%	0.0%	1.6%	1.9%	4.8%	13.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	37.8%
1991	846	2,3,4,5,6	11.2%	5.8%	1.5%	6.3%	11.1%	0.6%	0.7%	0.7%	4.3%	10.0%	13.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	34.5%
1992	684	2,3,4,5,6	15.2%	2.6%	2.6%	10.7%	6.4%	0.3%	0.0%	0.4%	3.5%	9.8%	9.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	38.5%
1993	391	2,3,4,5,6	8.4%	6.4%	1.3%	6.1%	7.9%	1.3%	0.0%	0.8%	12.3%	6.1%	20.7%	0.0%	0.0%	0.0%	0%	0.0%	0.0%	0.0%	0.0%	0.0%	28.6%
1994	601	2,3,4,5,6	3.8%	49.6%	2.3%	5.7%	1.8%	0.0%	0.0%	0.0%	3.8%	0.8%	9.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	22.8%
1995	311	2,3,4,5,6	8.0%	13.2%	0.0%	9.3%	6.8%	0.0%	0.0%	0.0%	7.7%	0.0%	17.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	37.3%
1996	294	2,3,4,5,6	7.1%	1.4%	0.0%	1.4%	4.1%	0.0%	0.0%	0.0%	8.5%	0.0%	19.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	58.5%
1997	494	2,3,4,5,6	10.1%	4.9%	3.0%	4.3%	8.7%	0.8%	4.9%	0.0%	10.5%	3.6%	3.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	45.5%
1998	625	2,3,4,5,6	14.9%	4.0%	2.2%	0.0%	11.2%	0.0%	0.0%	0.0%	7.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	59.7%
1999	1028	2,3,4,5,6	9.3%	3.9%	4.8%	2.1%	21.8%	0.0%	0.0%	0.0%	1.8%	0.4%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	54.4%
2000	865	2,3,4,5,6	14.2%	3.4%	5.4%	0.3%	6.6%	0.0%	0.0%	0.0%	3.4%	0.0%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	64.3%
2001	1286	2,3,4,5,6	10.7%	2.6%	2.0%	0.1%	5.7%	0.0%	0.0%	0.0%	1.9%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	76.4%
2002	959	2,3,4,5,6	15.5%	3.6%	0.9%	0.6%	14.7%	0.0%	0.0%	0.0%	2.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	61.9%
2003	561	2,3,4,5,6	19.6%	2.1%	0.9%	0.0%	26.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	51.0%
2004	862	2,3,4,5,6	8.6%	18.7%	1.7%	0.2%	19.6%	0.0%	0.0%	0.0%	0.8%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	48.8%
2005	950	2,3,4,5,6	18.0%	2.8%	2.9%	0.4%	18.7%	0.0%	0.0%	0.0%	1.5%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	54.4%
2006	846	2,3,4,5,6	17.6%	5.3%	1.3%	0.7%	9.0%	0.0%	0.8%	0.0%	4.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	60.5%
2007	647	2,3,4,5,6	20.4%	5.6%	1.1%	3.1%	15.0%	0.0%	0.0%	0.0%	6.8%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	47.1%
2008	412	2,3,4,5,6	12.4%	2.4%	0.2%	0.7%	8.5%	0.0%	0.0%	0.0%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	71.4%
2009	480	2,3,4,5,6	12.5%	4.2%	2.5%	0.8%	15.2%	0.0%	1.7%	0.0%	11.5%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.2%
2010	647	2,3,4,5,6	6.3%	6.2%	0.6%	0.0%	14.7%	0.0%	0.0%	0.0%	8.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	63.1%
1979-2010	1031		14.0%	6.9%	2.2%	4.6%	8.8%	0.3%	0.3%	0.3%	5.2%	3.8%	10.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	43.0%
1979-1984	1495		15.8%	4.3%	2.9%	9.9%	4.0%	0.4%	0.0%	1.2%	5.6%	10.4%	21.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	23.5%
1985-1995	1189		14.1%	11.4%	2.1%	6.7%	5.3%	0.5%	0.2%	0.4%	5.3%	4.9%	15.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.4%
1996-1998	471		10.7%	3.4%	1.8%	1.9%	8.0%	0.3%	1.6%	0.0%	8.7%	1.2%	7.7%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	54.6%
1999-2010	795		13.8%	5.1%	2.0%	0.8%	14.6%	0.0%	0.2%	0.0%	4.0%	0.1%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	58.6%

Appendix C.55. Percent distribution of Robertson Creek Fall (WCVI Hatchery and Natural) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM														
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			Esc.
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	4901	2,3,4,5	18.0%	0.6%	0.7%	11.6%	0.3%	8.1%	0.1%	0.6%	1.2%	11.0%	10.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	5.1%	32.6%
1980	4628	2,3,4,5	26.8%	6.2%	0.9%	8.0%	0.1%	6.9%	0.4%	0.0%	0.1%	8.3%	5.7%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	10.2%	3.0%	23.0%
1981	2622	2,3,4,5	27.2%	2.1%	0.8%	13.5%	0.6%	5.7%	0.6%	0.4%	0.8%	8.0%	6.3%	0.0%	0.0%	0.0%	0.0%	1.1%	0.1%	0.0%	11.9%	4.9%	16.1%
1982	4133	2,3,4,5	24.9%	4.0%	1.5%	14.7%	0.0%	6.0%	0.4%	0.2%	0.7%	7.1%	6.2%	0.0%	0.0%	0.0%	0.0%	0.7%	0.1%	0.0%	14.1%	6.1%	13.4%
1983	3590	2,3,4,5	36.5%	3.0%	0.4%	11.5%	0.2%	5.9%	0.0%	0.0%	0.2%	8.2%	3.2%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	16.8%	5.0%	8.9%
1984	2981	2,3,4,5	26.2%	4.6%	0.1%	14.0%	0.0%	6.6%	0.0%	0.0%	1.0%	4.0%	3.7%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	16.5%	15.2%	8.0%
1985	1406	2,3,4,5	17.4%	6.0%	0.0%	17.5%	0.0%	1.6%	0.0%	0.0%	0.6%	1.1%	6.6%	0.0%	0.0%	0.0%	0.0%	1.6%	0.1%	0.0%	1.3%	17.1%	29.2%
1986	759	2,3,4,5	13.7%	3.7%	0.4%	7.9%	0.5%	5.8%	0.7%	0.0%	0.5%	0.8%	4.2%	0.0%	0.0%	0.0%	0.0%	0.3%	0.7%	0.0%	0.4%	31.0%	29.5%
1987	1422	2,3,4,5	7.0%	1.8%	0.6%	6.0%	0.5%	2.2%	0.1%	0.0%	0.5%	2.8%	3.4%	0.0%	0.0%	0.0%	0.0%	0.3%	0.1%	0.0%	0.0%	20.5%	54.2%
1988	2685	2,3,4,5	9.2%	2.1%	0.9%	6.2%	0.8%	3.9%	4.5%	0.0%	0.6%	1.1%	2.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.2%	0.0%	7.5%	13.7%	47.0%
1989	5497	2,3,4,5	7.0%	2.2%	0.3%	8.1%	0.7%	2.2%	1.9%	0.0%	0.8%	1.5%	2.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	18.9%	18.2%	35.9%
1990	9957	2,3,4,5	16.3%	1.0%	1.8%	8.0%	1.0%	5.8%	1.4%	0.0%	0.3%	2.1%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	8.2%	8.4%	43.2%
1991	12533	2,3,4,5	17.2%	1.4%	3.1%	9.2%	0.8%	4.5%	1.3%	0.0%	0.4%	2.4%	1.2%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	15.6%	13.1%	29.7%
1992	8673	2,3,4,5	14.3%	2.8%	1.8%	7.1%	1.6%	18.7%	2.2%	0.0%	0.1%	3.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.4%	6.1%	40.4%
1993	6056	2,3,4,5	14.0%	1.0%	2.4%	7.1%	1.3%	13.9%	2.4%	0.0%	0.5%	1.9%	1.2%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	7.5%	12.9%	33.6%
1994	3400	2,3,4,5	16.2%	2.2%	4.2%	9.6%	0.9%	5.0%	4.0%	0.0%	0.4%	1.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	12.4%	16.6%	26.1%
1995	1272	2,3,4,5	14.9%	0.0%	4.2%	2.8%	1.7%	1.4%	2.9%	0.0%	1.4%	0.3%	0.4%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	6.8%	9.0%	53.9%
1996	684	2,3,4,5	5.6%	0.1%	1.9%	0.0%	2.8%	0.0%	0.0%	0.0%	1.5%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	87.4%
1997	1969	2,3,4,5	10.9%	1.5%	4.0%	4.5%	3.0%	0.2%	1.9%	0.0%	0.6%	1.9%	0.4%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	6.7%	18.3%	46.1%
1998	3191	2,3,4,5	16.0%	1.1%	4.9%	6.1%	2.8%	0.0%	4.5%	0.0%	0.6%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	4.1%	15.9%	43.9%
1999	1195	2,3,4,5	11.5%	0.4%	7.4%	5.4%	6.5%	0.0%	3.2%	0.0%	0.8%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.5%	17.7%	40.3%
2000	233	2,3,4,5	5.6%	0.0%	0.0%	0.0%	4.3%	0.0%	0.0%	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	88.4%
2001	910	2,3,4,5	3.0%	0.0%	1.6%	0.0%	0.4%	0.0%	2.1%	0.0%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	89.2%
2002	1890	2,3,4,5	11.2%	0.4%	1.5%	3.5%	3.8%	0.4%	2.9%	0.0%	0.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.7%	14.6%	53.4%
2003	2745	2,3,4,5	12.5%	1.7%	3.0%	0.7%	4.2%	0.0%	1.7%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.9%	14.2%	52.9%
2004	4557	2,3,4,5	12.0%	6.3%	2.7%	2.4%	4.7%	0.2%	1.3%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	12.7%	12.7%	43.7%
2005	3015	2,3,4,5	13.8%	1.4%	3.6%	2.8%	9.9%	0.0%	1.7%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	32.0%	8.1%	26.0%
2006	2637	2,3,4,5	9.8%	1.6%	2.4%	2.4%	5.6%	0.0%	3.6%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	26.6%	11.0%	35.7%
2007	2067	2,3,4,5	15.5%	1.9%	3.4%	5.1%	6.7%	0.1%	4.1%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	27.8%	12.5%	22.0%
2008	1499	2,3,4,5	7.7%	0.3%	1.3%	2.3%	5.8%	0.0%	1.2%	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	21.4%	13.0%	45.3%
2009	1305	2,3,4,5	11.9%	6.8%	2.2%	2.0%	10.2%	0.0%	4.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.9%	12.6%	42.0%
2010	1202	2,3,4,5	6.0%	0.1%	3.2%	2.6%	9.0%	0.7%	2.4%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	4.7%	3.1%	67.2%
1979-2010	3300		14.4%	2.1%	2.1%	6.3%	2.8%	3.3%	1.8%	0.0%	0.8%	2.1%	1.9%	0.0%	0.0%	0.0%	0.0%	0.2%	0.1%	0.0%	9.8%	11.3%	40.9%
1979-1984	3809		26.6%	3.4%	0.7%	12.2%	0.2%	6.5%	0.2%	0.2%	0.7%	7.8%	5.9%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	11.6%	6.6%	17.0%
1985-1995	4878		13.4%	2.2%	1.8%	8.1%	0.9%	5.9%	2.0%	0.0%	0.6%	1.7%	2.4%	0.0%	0.0%	0.0%	0.0%	0.3%	0.1%	0.0%	7.2%	15.2%	38.4%
1996-1998	1948		10.8%	0.9%	3.6%	3.5%	2.9%	0.1%	2.2%	0.0%	0.9%	0.9%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	3.6%	11.4%	59.1%
1999-2010	1938		10.0%	1.7%	2.7%	2.4%	5.9%	0.1%	2.3%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.9%	10.1%	50.5%

Appendix C.56. Percent distribution of Robertson Creek Fall (WCVI Hatchery and Natural) total fishing mortalities among fisheries and escapement.

	Estimated		AABM							ISBM													
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	5485	2,3,4,5	21.5%	0.6%	0.7%	11.9%	0.3%	8.3%	0.1%	0.5%	1.1%	11.2%	9.4%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	4.9%	29.2%
1980	5100	2,3,4,5	26.1%	6.3%	1.1%	8.5%	0.1%	7.3%	0.5%	0.0%	0.1%	8.6%	5.8%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	9.5%	3.0%	20.9%
1981	3131	2,3,4,5	31.7%	1.9%	1.0%	13.8%	0.6%	5.7%	0.5%	0.4%	0.7%	8.2%	5.7%	0.0%	0.0%	0.0%	0.0%	1.3%	0.1%	0.0%	10.3%	4.5%	13.5%
1982	4736	2,3,4,5	29.1%	3.8%	1.6%	14.6%	0.1%	6.0%	0.3%	0.1%	0.7%	7.0%	5.8%	0.0%	0.0%	0.0%	0.0%	0.7%	0.1%	0.0%	12.5%	5.8%	11.7%
1983	4108	2,3,4,5	41.5%	2.8%	0.4%	11.0%	0.2%	5.6%	0.0%	0.0%	0.2%	7.9%	2.9%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	14.8%	4.7%	7.7%
1984	3318	2,3,4,5	30.0%	4.3%	0.1%	13.7%	0.0%	6.6%	0.0%	0.0%	1.0%	3.9%	3.5%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	14.9%	14.6%	7.1%
1985	1700	2,3,4,5	19.8%	13.8%	0.0%	15.9%	0.0%	1.4%	0.0%	0.0%	0.6%	0.9%	5.6%	0.0%	0.0%	0.0%	0.0%	1.4%	0.2%	0.0%	1.1%	15.2%	24.1%
1986	919	2,3,4,5	15.8%	8.5%	0.5%	8.1%	0.8%	6.0%	0.7%	0.0%	0.5%	0.9%	3.9%	0.0%	0.0%	0.0%	0.0%	0.3%	1.4%	0.0%	0.3%	28.0%	24.4%
1987	1617	2,3,4,5	10.4%	3.3%	1.1%	7.2%	0.6%	2.6%	0.2%	0.0%	0.5%	3.3%	3.3%	0.0%	0.0%	0.0%	0.0%	0.3%	0.1%	0.0%	0.0%	19.5%	47.7%
1988	3112	2,3,4,5	11.4%	4.5%	1.3%	7.3%	1.0%	4.8%	4.6%	0.0%	1.0%	1.3%	2.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.3%	0.0%	6.7%	12.9%	40.5%
1989	6700	2,3,4,5	10.0%	8.2%	0.4%	9.4%	0.7%	2.5%	1.8%	0.0%	1.2%	1.6%	2.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	16.2%	16.4%	29.5%
1990	11153	2,3,4,5	19.1%	2.5%	2.0%	8.7%	1.0%	6.2%	1.4%	0.0%	0.3%	2.3%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	7.4%	8.1%	38.6%
1991	13849	2,3,4,5	19.5%	2.5%	3.2%	9.6%	0.9%	4.9%	1.3%	0.0%	0.4%	2.6%	1.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	14.2%	12.7%	26.9%
1992	11377	2,3,4,5	15.4%	16.1%	1.6%	6.5%	1.3%	17.1%	1.9%	0.0%	0.1%	2.7%	1.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.3%	5.0%	30.8%
1993	6698	2,3,4,5	16.0%	2.1%	2.4%	7.5%	1.3%	14.7%	2.4%	0.0%	0.5%	2.1%	1.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	6.9%	12.5%	30.3%
1994	3819	2,3,4,5	17.8%	6.8%	3.9%	9.1%	0.8%	4.9%	3.8%	0.0%	0.4%	1.2%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	11.1%	15.8%	23.2%
1995	1378	2,3,4,5	16.5%	0.0%	4.7%	3.1%	2.2%	1.6%	3.0%	0.0%	1.7%	0.4%	0.6%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	6.4%	9.8%	49.7%
1996	805	2,3,4,5	9.1%	0.1%	4.5%	2.7%	2.4%	0.7%	0.0%	0.0%	3.4%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	74.3%
1997	2272	2,3,4,5	14.5%	4.1%	4.6%	5.1%	3.7%	0.2%	1.8%	0.0%	0.6%	2.1%	0.5%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	5.8%	16.9%	39.9%
1998	3360	2,3,4,5	16.4%	1.9%	5.0%	6.1%	3.5%	0.0%	4.6%	0.0%	0.6%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	3.9%	16.2%	41.7%
1999	1264	2,3,4,5	12.2%	0.6%	7.5%	5.4%	7.5%	0.0%	3.3%	0.0%	0.8%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.2%	18.2%	38.1%
2000	262	2,3,4,5	6.1%	0.0%	0.0%	0.0%	8.0%	0.0%	0.0%	0.0%	7.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	78.6%
2001	971	2,3,4,5	4.2%	0.0%	3.0%	0.0%	0.7%	0.0%	2.5%	0.0%	4.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	83.6%
2002	2069	2,3,4,5	13.1%	0.6%	1.8%	3.9%	4.9%	0.4%	3.2%	0.0%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.1%	15.3%	48.8%
2003	3020	2,3,4,5	13.9%	2.2%	3.5%	0.8%	5.9%	0.0%	2.2%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.1%	15.1%	48.1%
2004	5218	2,3,4,5	12.9%	9.8%	2.8%	2.6%	6.5%	0.1%	1.4%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	11.2%	13.0%	38.2%
2005	3342	2,3,4,5	14.7%	1.6%	4.0%	3.0%	13.3%	0.0%	1.9%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	29.1%	8.1%	23.5%
2006	2860	2,3,4,5	11.6%	2.7%	2.7%	2.6%	6.3%	0.0%	3.8%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	24.7%	11.1%	32.9%
2007	2301	2,3,4,5	16.5%	3.5%	3.7%	5.2%	8.5%	0.1%	4.3%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.2%	12.4%	19.7%
2008	1607	2,3,4,5	10.0%	0.5%	1.6%	2.6%	6.3%	0.0%	1.3%	0.0%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.2%	13.2%	42.3%
2009	1484	2,3,4,5	12.8%	7.1%	2.6%	2.0%	13.4%	0.0%	4.3%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.1%	12.6%	36.9%
2010	1345	2,3,4,5	8.1%	0.2%	4.2%	3.3%	11.6%	0.7%	2.9%	0.0%	1.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	4.3%	3.2%	60.1%
1979-2010	3762		16.6%	3.8%	2.4%	6.6%	3.6%	3.4%	1.9%	0.0%	1.2%	2.2%	1.8%	0.0%	0.0%	0.0%	0.0%	0.2%	0.1%	0.0%	8.9%	11.0%	36.3%
1979-1984	4313		30.3%	3.3%	0.8%	12.2%	0.2%	6.6%	0.2%	0.2%	0.6%	7.8%	5.5%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	10.3%	6.3%	15.0%
1985-1995	5666		15.6%	6.2%	1.9%	8.4%	1.0%	6.1%	1.9%	0.0%	0.7%	1.7%	2.2%	0.0%	0.0%	0.0%	0.0%	0.3%	0.2%	0.0%	6.4%	14.2%	33.2%
1996-1998	2146		13.3%	2.1%	4.7%	4.7%	3.2%	0.3%	2.1%	0.0%	1.5%	1.0%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	11.7%	52.0%
1999-2010	2145		11.3%	2.4%	3.1%	2.6%	7.8%	0.1%	2.6%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.9%	10.3%	45.9%

Appendix C.57. Percent distribution of Samish Fall Fingerling (Nooksack Fall Fingerling) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM														Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal				
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	1916	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	83	5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	898	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	4953	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	6152	4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	357	5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	23	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	614	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	1777	2,3,4	0.0%	0.0%	0.0%	0.2%	0.3%	6.8%	1.9%	0.9%	16.3%	0.2%	3.7%	0.0%	7.4%	0.0%	0.0%	36.2%	9.7%	0.0%	0.0%	0.0%	16.5%
1990	2348	2,3,4,5	2.1%	0.0%	0.0%	0.5%	0.0%	18.8%	2.0%	3.4%	9.8%	0.1%	1.5%	0.0%	9.1%	0.0%	0.1%	29.1%	7.4%	0.0%	0.3%	0.0%	15.6%
1991	940	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	13.4%	3.4%	1.7%	9.7%	0.1%	3.0%	0.0%	8.9%	0.0%	0.7%	21.7%	8.8%	0.0%	1.5%	1.3%	25.7%
1992	578	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.7%	11.4%	0.9%	2.1%	12.5%	0.0%	2.2%	0.0%	10.2%	0.0%	0.7%	15.6%	15.7%	0.0%	0.0%	0.7%	27.3%
1993	1043	2,3,4,5	0.0%	0.0%	0.0%	0.3%	0.3%	12.1%	8.5%	2.8%	16.4%	0.2%	2.8%	0.0%	3.9%	0.0%	0.1%	16.5%	12.6%	0.0%	0.0%	0.0%	23.6%
1994	939	2,3,4,5	0.2%	0.0%	0.0%	0.4%	0.0%	12.0%	5.4%	1.2%	12.7%	0.0%	2.2%	0.0%	2.2%	0.0%	0.0%	38.4%	3.5%	0.0%	0.0%	0.4%	21.2%
1995	685	2,3,4,5	0.3%	0.0%	0.0%	0.0%	0.0%	5.8%	3.4%	0.0%	5.1%	0.0%	1.0%	0.0%	3.4%	0.0%	0.0%	27.2%	12.7%	0.0%	0.0%	2.3%	38.8%
1996	1106	2,3,4,5	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	10.8%	0.0%	0.4%	0.0%	1.8%	0.0%	0.0%	34.1%	9.4%	0.0%	0.0%	14.6%	28.2%
1997	1290	2,3,4,5	0.5%	0.1%	0.0%	0.3%	0.2%	2.3%	1.8%	0.0%	8.2%	0.7%	0.8%	0.0%	0.9%	0.0%	0.1%	34.5%	9.4%	0.0%	0.0%	0.3%	40.0%
1998	699	2,3,4,5	3.4%	0.0%	0.0%	0.0%	0.0%	1.6%	3.1%	0.0%	10.9%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	43.5%	3.4%	0.0%	0.0%	0.6%	32.8%
1999	248	2,3,4,5	3.6%	0.0%	0.0%	2.0%	3.2%	1.6%	10.1%	0.0%	10.9%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	38.3%	3.6%	0.0%	0.0%	0.0%	25.0%
2000	269	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	12.3%	10.4%	0.0%	6.3%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	36.8%	1.5%	0.0%	0.0%	0.0%	32.3%
2001	1521	2,3,4,5	0.0%	0.2%	0.0%	0.0%	0.1%	4.7%	5.2%	0.0%	7.6%	0.0%	0.3%	0.0%	2.4%	0.0%	0.1%	39.4%	4.0%	0.0%	0.5%	0.0%	35.6%
2002	1530	2,3,4,5	0.8%	0.0%	0.0%	0.7%	0.0%	8.8%	6.6%	0.0%	7.0%	0.0%	0.0%	0.0%	2.8%	0.0%	0.6%	36.5%	4.4%	0.0%	0.3%	0.0%	31.6%
2003	730	2,3,4,5	0.8%	0.0%	0.0%	0.0%	0.0%	13.7%	2.6%	0.0%	5.1%	0.0%	0.3%	0.0%	6.2%	0.0%	0.5%	38.6%	2.2%	0.0%	0.3%	0.0%	29.7%
2004	494	2,3,4,5	0.4%	0.0%	0.0%	0.0%	0.0%	7.7%	6.3%	0.0%	4.9%	0.0%	0.0%	0.0%	10.5%	0.0%	0.4%	30.0%	5.7%	0.0%	1.8%	0.0%	32.4%
2005	637	2,3,4,5	0.3%	0.2%	0.0%	0.3%	0.0%	11.3%	7.5%	0.0%	12.7%	0.0%	0.0%	0.0%	7.1%	0.0%	0.8%	33.8%	3.8%	0.0%	0.9%	0.0%	21.4%
2006	1435	2,3,4,5	0.8%	0.1%	0.0%	0.1%	0.0%	8.3%	5.4%	0.0%	5.5%	0.0%	0.0%	0.0%	6.2%	0.0%	1.2%	51.2%	5.6%	0.0%	0.5%	0.0%	15.1%
2007	1833	2,3,4,5	0.5%	0.0%	0.0%	0.0%	0.0%	9.4%	4.7%	0.0%	5.8%	0.0%	0.0%	0.0%	2.7%	0.0%	0.4%	29.7%	3.3%	0.0%	0.5%	20.4%	22.5%
2008	1624	2,3,4,5	0.2%	0.0%	0.0%	0.0%	0.0%	6.4%	4.7%	0.0%	5.6%	0.0%	0.0%	0.0%	3.8%	0.0%	0.3%	43.0%	9.0%	0.0%	0.3%	0.0%	26.6%
2009	1479	2,3,4,5	0.0%	0.1%	0.0%	0.0%	0.0%	3.2%	5.3%	0.0%	3.3%	0.0%	0.0%	0.0%	3.3%	0.0%	0.2%	33.5%	7.8%	0.0%	0.6%	0.0%	42.7%
2010	1637	2,3,4,5	0.0%	0.0%	0.1%	0.0%	0.5%	7.4%	6.1%	0.0%	4.2%	0.0%	0.0%	0.0%	9.3%	0.0%	0.7%	31.3%	8.6%	0.0%	0.8%	0.0%	31.0%
1979-2010	1129		0.6%	0.0%	0.0%	0.2%	0.2%	8.1%	4.8%	0.5%	8.7%	0.1%	0.8%	0.0%	4.8%	0.0%	0.3%	33.6%	6.9%	0.0%	0.4%	1.8%	28.0%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	1187		0.4%	0.0%	0.0%	0.2%	0.2%	11.5%	3.6%	1.7%	11.8%	0.1%	2.4%	0.0%	6.5%	0.0%	0.2%	26.4%	10.1%	0.0%	0.3%	0.7%	24.1%
1996-1998	1032		1.3%	0.1%	0.0%	0.1%	0.1%	1.3%	1.9%	0.0%	9.9%	0.2%	0.4%	0.0%	1.2%	0.0%	0.0%	37.4%	7.4%	0.0%	0.0%	5.1%	33.7%
1999-2010	1120		0.6%	0.0%	0.0%	0.3%	0.3%	7.9%	6.2%	0.0%	6.6%	0.0%	0.1%	0.0%	4.7%	0.0%	0.4%	36.8%	5.0%	0.0%	0.5%	1.7%	28.8%

Appendix C.58. Percent distribution of Samish Fall Fingerling (Nooksack Fall Fingerling) total fishing mortalities among fisheries and escapement.

	Estimated		AABM							ISBM														
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	1964	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	83	5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	1513	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	5385	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	6362	4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	369	5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	74	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	994	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	2078	2,3,4	0.2%	0.0%	0.0%	0.2%	0.2%	9.0%	1.8%	1.3%	18.1%	0.2%	3.3%	0.0%	7.8%	0.0%	0.0%	32.7%	11.0%	0.0%	0.0%	0.0%	14.1%
1990	2557	2,3,4,5	2.2%	0.0%	0.0%	0.5%	0.0%	20.1%	2.0%	3.5%	10.5%	0.1%	1.5%	0.0%	9.4%	0.0%	0.1%	27.3%	8.1%	0.0%	0.3%	0.0%	14.3%
1991	1038	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	14.4%	3.4%	1.8%	11.0%	0.1%	2.9%	0.0%	9.3%	0.0%	0.8%	20.2%	10.1%	0.0%	1.3%	1.3%	23.3%
1992	775	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.6%	10.8%	0.8%	2.2%	18.2%	0.0%	1.8%	0.0%	9.3%	0.0%	0.6%	13.3%	21.3%	0.0%	0.0%	0.6%	20.4%
1993	1243	2,3,4,5	0.0%	0.0%	0.0%	0.3%	0.2%	13.5%	7.9%	3.4%	19.6%	0.2%	2.4%	0.0%	4.0%	0.0%	0.1%	15.0%	13.5%	0.0%	0.0%	0.0%	19.8%
1994	1048	2,3,4,5	0.5%	0.0%	0.0%	0.5%	0.0%	13.1%	5.4%	1.3%	14.7%	0.0%	2.4%	0.0%	2.1%	0.0%	0.0%	36.5%	4.1%	0.0%	0.0%	0.5%	19.0%
1995	812	2,3,4,5	0.2%	0.0%	0.0%	0.0%	0.0%	6.8%	3.2%	0.0%	6.9%	0.0%	1.6%	0.0%	3.1%	0.0%	0.0%	24.6%	18.5%	0.0%	0.0%	2.3%	32.8%
1996	1401	2,3,4,5	0.0%	0.1%	0.0%	0.1%	0.0%	0.9%	0.6%	0.0%	14.8%	0.0%	0.5%	0.0%	1.6%	0.0%	0.0%	31.9%	12.8%	0.0%	0.0%	14.4%	22.3%
1997	1405	2,3,4,5	0.6%	0.1%	0.0%	0.4%	0.1%	2.8%	1.7%	0.0%	9.7%	0.8%	1.1%	0.0%	0.9%	0.0%	0.1%	33.7%	11.0%	0.0%	0.0%	0.4%	36.7%
1998	736	2,3,4,5	3.5%	0.0%	0.0%	0.0%	0.0%	1.5%	3.3%	0.0%	12.2%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	42.5%	4.5%	0.0%	0.0%	0.7%	31.1%
1999	281	2,3,4,5	4.3%	0.0%	0.0%	2.1%	3.9%	1.4%	10.3%	0.0%	13.9%	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%	35.6%	4.6%	0.0%	0.0%	0.0%	22.1%
2000	380	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	9.5%	0.0%	16.8%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	35.5%	5.0%	0.0%	0.0%	0.0%	22.9%
2001	1712	2,3,4,5	0.0%	0.4%	0.0%	0.0%	0.1%	4.5%	5.5%	0.0%	9.8%	0.0%	0.6%	0.0%	2.7%	0.0%	0.1%	38.0%	6.3%	0.0%	0.5%	0.0%	31.6%
2002	1623	2,3,4,5	0.9%	0.0%	0.0%	0.7%	0.0%	8.5%	7.4%	0.0%	7.8%	0.0%	0.0%	0.0%	3.0%	0.0%	0.6%	35.5%	5.6%	0.0%	0.3%	0.0%	29.8%
2003	773	2,3,4,5	0.9%	0.0%	0.0%	0.0%	0.0%	13.7%	3.4%	0.0%	6.2%	0.0%	0.3%	0.0%	6.6%	0.0%	0.5%	37.1%	3.0%	0.0%	0.3%	0.0%	28.1%
2004	560	2,3,4,5	0.5%	0.0%	0.0%	0.0%	0.0%	7.3%	7.0%	0.0%	6.6%	0.0%	0.0%	0.0%	11.8%	0.0%	0.4%	28.2%	7.9%	0.0%	1.8%	0.0%	28.6%
2005	779	2,3,4,5	0.4%	0.1%	0.0%	0.4%	0.0%	10.4%	8.0%	0.0%	18.9%	0.0%	0.0%	0.0%	7.2%	0.0%	0.8%	29.8%	5.9%	0.0%	0.8%	0.0%	17.5%
2006	1619	2,3,4,5	1.0%	0.1%	0.0%	0.2%	0.0%	7.8%	5.7%	0.0%	6.8%	0.0%	0.0%	0.0%	6.8%	0.0%	1.2%	49.7%	6.9%	0.0%	0.5%	0.0%	13.3%
2007	2229	2,3,4,5	0.5%	0.0%	0.0%	0.0%	0.0%	8.7%	4.7%	0.0%	7.9%	0.0%	0.0%	0.0%	2.7%	0.0%	0.4%	29.4%	5.3%	0.0%	0.5%	21.4%	18.5%
2008	1804	2,3,4,5	0.2%	0.0%	0.0%	0.0%	0.0%	6.1%	5.0%	0.0%	7.0%	0.0%	0.0%	0.0%	4.3%	0.0%	0.3%	42.2%	10.5%	0.0%	0.3%	0.0%	23.9%
2009	1726	2,3,4,5	0.0%	0.1%	0.0%	0.0%	0.0%	3.1%	5.7%	0.0%	5.2%	0.0%	0.0%	0.0%	3.4%	0.0%	0.2%	32.7%	12.6%	0.0%	0.6%	0.0%	36.6%
2010	1824	2,3,4,5	0.0%	0.0%	0.1%	0.0%	0.7%	7.0%	6.9%	0.0%	5.2%	0.0%	0.0%	0.0%	10.5%	0.0%	0.7%	30.6%	9.9%	0.0%	0.8%	0.0%	27.9%
1979-2010	1291		0.7%	0.0%	0.0%	0.2%	0.3%	8.2%	5.0%	0.6%	11.3%	0.1%	0.8%	0.0%	5.0%	0.0%	0.3%	31.9%	9.0%	0.0%	0.4%	1.9%	24.3%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	1364		0.4%	0.0%	0.0%	0.2%	0.2%	12.5%	3.5%	1.9%	14.2%	0.1%	2.3%	0.0%	6.4%	0.0%	0.2%	24.2%	12.4%	0.0%	0.2%	0.7%	20.5%
1996-1998	1181		1.4%	0.1%	0.0%	0.1%	0.0%	1.7%	1.9%	0.0%	12.3%	0.3%	0.5%	0.0%	1.1%	0.0%	0.0%	36.1%	9.4%	0.0%	0.0%	5.2%	30.0%
1999-2010	1276		0.7%	0.1%	0.0%	0.3%	0.4%	7.4%	6.6%	0.0%	9.3%	0.0%	0.1%	0.0%	5.1%	0.0%	0.4%	35.4%	7.0%	0.0%	0.5%	1.8%	25.1%

Appendix C.59. Percent distribution of Lower Shuswap River Summer (Fraser Early) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	56	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	647	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	1615	2,3,4	6.9%	0.0%	0.0%	9.4%	1.3%	5.6%	0.0%	0.0%	2.3%	1.8%	9.8%	0.0%	0.0%	0.0%	0.1%	1.9%	0.2%	0.0%	0.0%	2.5%	58.3%
1989	1304	2,3,4,5	4.8%	1.5%	0.0%	7.8%	0.0%	1.2%	0.0%	0.0%	0.4%	0.6%	15.8%	0.0%	0.0%	0.0%	0.0%	1.8%	0.2%	0.0%	0.0%	0.5%	65.5%
1990	1073	2,3,4,5	29.3%	0.0%	0.9%	19.6%	1.4%	3.8%	3.4%	0.0%	1.7%	1.8%	12.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	1.7%	24.0%
1991	531	2,3,4,5	31.1%	0.0%	0.8%	23.5%	1.5%	3.2%	0.0%	0.0%	0.6%	1.5%	13.6%	0.0%	0.0%	0.0%	0.0%	3.8%	0.0%	0.0%	0.0%	0.8%	19.8%
1992	207	2,3,4,5	14.5%	0.0%	0.0%	19.3%	1.4%	5.3%	0.0%	0.0%	4.3%	7.2%	14.5%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	0.0%	0.0%	5.8%	25.6%
1993	462	2,3,4,5	8.9%	0.6%	0.0%	8.9%	0.6%	7.6%	0.0%	0.0%	0.4%	0.6%	16.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%	52.4%
1994	688	2,3,4,5	10.5%	0.0%	1.5%	21.8%	3.6%	10.0%	0.0%	1.2%	1.2%	12.6%	20.6%	0.0%	0.0%	0.0%	0.0%	4.5%	0.0%	0.0%	0.0%	0.0%	12.5%
1995	295	2,3,4,5	17.6%	0.0%	5.4%	13.2%	11.2%	4.1%	0.0%	0.0%	2.0%	1.0%	13.9%	0.0%	0.0%	0.0%	0.0%	5.8%	0.0%	0.0%	0.3%	0.7%	24.7%
1996	552	2,3,4,5	16.7%	0.0%	0.0%	0.0%	4.0%	0.0%	1.3%	0.0%	3.3%	0.0%	8.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	1.4%	64.5%
1997	315	2,3,4,5	19.4%	1.0%	0.0%	13.0%	6.0%	0.6%	0.0%	0.0%	7.6%	1.3%	29.5%	0.0%	0.0%	0.0%	0.0%	4.4%	0.0%	0.0%	0.3%	0.0%	16.8%
1998	628	2,3,4,5	21.3%	0.3%	8.6%	9.4%	15.1%	0.0%	0.8%	0.0%	6.2%	0.0%	5.7%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.8%	0.8%	29.9%
1999	342	2,3,4,5	28.4%	0.0%	13.2%	1.5%	13.5%	0.0%	0.0%	0.0%	5.8%	0.0%	11.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.9%	25.4%
2000	649	2,3,4,5	9.6%	0.0%	6.6%	0.0%	3.5%	0.0%	0.0%	0.0%	3.4%	0.0%	6.5%	0.0%	0.0%	0.0%	0.5%	0.2%	0.0%	0.0%	0.5%	1.4%	68.0%
2001	1087	2,3,4,5	5.9%	0.8%	0.3%	0.0%	4.0%	0.0%	0.0%	0.1%	4.3%	0.8%	0.8%	0.0%	0.1%	0.0%	0.0%	0.2%	0.0%	0.0%	1.2%	1.6%	79.9%
2002	1412	2,3,4,5	16.5%	0.0%	3.0%	11.7%	5.8%	1.6%	0.0%	0.0%	2.6%	0.1%	8.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.5%	48.7%
2003	1551	2,3,4,5	10.1%	0.7%	2.0%	8.1%	5.2%	0.0%	0.3%	0.0%	5.2%	0.8%	4.2%	0.0%	0.4%	0.0%	0.0%	0.6%	0.0%	0.0%	1.3%	2.6%	58.7%
2004	1053	2,3,4,5	16.2%	0.0%	1.6%	8.4%	8.2%	0.9%	0.0%	0.0%	4.0%	0.0%	12.3%	0.0%	0.3%	0.0%	0.0%	1.1%	0.0%	0.0%	0.5%	2.8%	43.7%
2005	738	2,3,4,5	13.6%	0.0%	0.8%	11.1%	15.2%	0.4%	3.1%	0.0%	4.1%	0.0%	7.6%	0.0%	0.3%	0.0%	0.0%	0.4%	0.0%	0.0%	0.1%	3.9%	39.4%
2006	1228	2,3,4,5	11.6%	0.0%	2.0%	12.9%	12.0%	0.3%	0.9%	0.0%	6.6%	0.0%	6.8%	0.0%	0.2%	0.0%	0.0%	0.8%	0.0%	0.0%	0.6%	3.0%	42.1%
2007	405	2,3,4,5	6.2%	0.2%	3.2%	2.7%	6.4%	0.0%	0.7%	0.0%	3.5%	0.0%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.9%	67.4%
2008	1598	2,3,4,5	6.7%	0.0%	0.3%	6.6%	8.1%	0.0%	1.5%	0.0%	4.6%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	3.1%	66.3%
2009	1566	2,3,4,5	7.6%	0.0%	1.0%	5.5%	5.2%	0.8%	2.1%	0.0%	6.1%	0.0%	9.5%	0.0%	0.1%	0.0%	0.0%	0.0%	0.3%	0.0%	1.1%	6.3%	54.4%
2010	1851	2,3,4,5	8.4%	0.0%	1.3%	9.3%	6.7%	0.0%	0.4%	0.0%	4.5%	0.0%	9.2%	0.0%	0.3%	0.0%	0.1%	1.6%	0.0%	0.0%	0.7%	2.2%	55.3%
1979-2010	920		14.0%	0.2%	2.3%	9.7%	6.1%	2.0%	0.6%	0.1%	3.7%	1.3%	10.5%	0.0%	0.1%	0.0%	0.0%	1.2%	0.1%	0.0%	0.5%	2.3%	45.4%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	772		15.4%	0.3%	1.1%	15.4%	2.6%	5.1%	0.4%	0.1%	1.6%	3.4%	14.5%	0.0%	0.1%	0.0%	0.0%	2.2%	0.3%	0.0%	0.0%	1.9%	35.3%
1996-1998	498		19.1%	0.4%	2.9%	7.5%	8.4%	0.2%	0.7%	0.0%	5.7%	0.4%	14.5%	0.0%	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%	0.6%	0.7%	37.1%
1999-2010	1123		11.7%	0.1%	3.0%	6.5%	7.8%	0.3%	0.8%	0.0%	4.6%	0.1%	6.8%	0.0%	0.1%	0.0%	0.0%	0.4%	0.0%	0.0%	0.7%	2.9%	54.1%

Appendix C.60. Percent distribution of Lower Shuswap River Summer (Fraser Early) total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	120	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	756	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	1744	2,3,4	9.1%	0.2%	0.1%	11.0%	1.3%	5.8%	0.1%	0.0%	2.5%	1.9%	9.2%	0.0%	0.0%	0.0%	0.1%	1.9%	0.3%	0.0%	0.0%	2.5%	54.0%
1989	1417	2,3,4,5	6.3%	5.2%	0.0%	8.5%	0.0%	1.3%	0.0%	0.0%	0.4%	0.6%	14.9%	0.0%	0.0%	0.0%	0.0%	1.8%	0.1%	0.0%	0.0%	0.5%	60.3%
1990	1152	2,3,4,5	30.1%	0.0%	1.0%	20.5%	1.4%	4.1%	3.3%	0.0%	1.8%	1.9%	11.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	1.6%	22.3%
1991	605	2,3,4 5	35.5%	0.0%	0.7%	23.1%	1.5%	3.1%	0.0%	0.0%	0.5%	1.5%	11.9%	0.0%	0.0%	0.0%	0.0%	4.1%	0.0%	0.0%	0.0%	0.7%	17.4%
1992	247	2,3,4,5	16.2%	0.0%	0.0%	20.2%	1.6%	5.3%	0.0%	0.0%	7.3%	7.3%	12.6%	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	0.0%	5.3%	21.5%
1993	523	2,3,4,5	11.7%	1.7%	0.0%	11.1%	0.8%	9.0%	0.0%	0.0%	0.4%	1.0%	14.5%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%	46.3%
1994	807	2,3,4,5	12.0%	0.0%	1.5%	22.2%	3.6%	10.4%	0.0%	1.1%	1.2%	12.9%	18.8%	0.0%	0.0%	0.0%	0.0%	5.6%	0.0%	0.0%	0.0%	0.0%	10.7%
1995	380	2,3,4,5	23.2%	0.0%	5.3%	13.7%	11.3%	4.2%	0.0%	0.0%	2.1%	1.1%	13.9%	0.0%	0.0%	0.0%	0.0%	5.3%	0.0%	0.0%	0.3%	0.5%	19.2%
1996	600	2,3,4,5	20.0%	0.0%	0.0%	0.5%	3.8%	0.3%	1.3%	0.0%	4.3%	0.0%	8.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	1.5%	59.3%
1997	391	2,3,4,5	21.2%	1.5%	0.0%	13.0%	7.2%	0.8%	0.0%	0.0%	8.4%	1.3%	28.4%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	0.0%	0.3%	0.0%	13.6%
1998	747	2,3,4,5	21.3%	0.5%	9.0%	9.2%	18.9%	0.0%	0.8%	0.0%	7.0%	0.0%	5.9%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.7%	0.7%	25.2%
1999	405	2,3,4,5	32.3%	0.0%	13.6%	1.5%	14.3%	0.0%	0.0%	0.0%	6.2%	0.0%	9.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.7%	21.5%
2000	749	2,3,4,5	10.7%	0.0%	9.6%	0.0%	6.4%	0.0%	0.0%	0.0%	5.5%	0.0%	6.5%	0.0%	0.0%	0.0%	0.5%	0.1%	0.0%	0.0%	0.4%	1.3%	58.9%
2001	1196	2,3,4,5	7.9%	1.5%	0.3%	0.0%	5.6%	0.0%	0.0%	0.1%	6.3%	1.4%	1.3%	0.0%	0.1%	0.0%	0.0%	0.2%	0.0%	0.0%	1.2%	1.5%	72.6%
2002	1557	2,3,4,5	18.1%	0.0%	3.4%	12.7%	7.6%	1.5%	0.0%	0.0%	3.1%	0.1%	8.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.5%	44.2%
2003	1678	2,3,4,5	11.0%	1.0%	2.3%	8.8%	6.7%	0.0%	0.4%	0.0%	6.0%	0.9%	3.9%	0.0%	0.4%	0.0%	0.0%	0.7%	0.0%	0.0%	1.2%	2.6%	54.3%
2004	1206	2,3,4,5	17.1%	0.0%	1.8%	9.0%	12.8%	0.7%	0.0%	0.0%	4.9%	0.0%	11.0%	0.0%	0.2%	0.0%	0.0%	1.2%	0.0%	0.0%	0.4%	2.7%	38.1%
2005	834	2,3,4,5	14.7%	0.0%	0.8%	12.2%	18.0%	0.4%	3.2%	0.0%	4.4%	0.0%	6.8%	0.0%	0.2%	0.0%	0.0%	0.4%	0.0%	0.0%	0.1%	3.7%	34.9%
2006	1315	2,3,4,5	11.9%	0.0%	2.1%	13.2%	14.0%	0.3%	1.0%	0.0%	7.1%	0.0%	6.5%	0.0%	0.2%	0.0%	0.0%	0.8%	0.0%	0.0%	0.5%	3.0%	39.3%
2007	527	2,3,4,5	7.4%	0.2%	7.6%	3.0%	12.1%	0.0%	0.9%	0.0%	8.5%	0.0%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.1%	51.8%
2008	1786	2,3,4,5	8.8%	0.0%	0.5%	7.8%	9.4%	0.0%	1.6%	0.0%	6.8%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	3.0%	59.3%
2009	1726	2,3,4,5	9.0%	0.0%	1.2%	6.3%	6.3%	0.8%	2.3%	0.0%	7.8%	0.0%	9.3%	0.0%	0.1%	0.0%	0.0%	0.0%	0.3%	0.0%	1.0%	6.1%	49.4%
2010	2005	2,3,4,5	9.9%	0.0%	1.4%	10.3%	8.0%	0.0%	0.5%	0.0%	5.1%	0.0%	8.8%	0.0%	0.3%	0.0%	0.1%	1.7%	0.0%	0.0%	0.6%	2.1%	51.0%
1979-2010	1026		15.9%	0.5%	2.7%	10.3%	7.5%	2.1%	0.7%	0.1%	4.7%	1.4%	9.8%	0.0%	0.1%	0.0%	0.0%	1.3%	0.2%	0.0%	0.4%	2.1%	40.2%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	859		18.0%	0.9%	1.1%	16.3%	2.7%	5.4%	0.4%	0.1%	2.0%	3.5%	13.4%	0.0%	0.0%	0.0%	0.0%	2.3%	0.5%	0.0%	0.0%	1.8%	31.4%
1996-1998	579		20.8%	0.7%	3.0%	7.6%	10.0%	0.4%	0.7%	0.0%	6.6%	0.4%	14.1%	0.0%	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%	0.5%	0.7%	32.7%
1999-2010	1249		13.2%	0.2%	3.7%	7.1%	10.1%	0.3%	0.8%	0.0%	6.0%	0.2%	6.4%	0.0%	0.1%	0.0%	0.1%	0.4%	0.0%	0.0%	0.6%	2.7%	47.9%

Appendix C.61. Percent distribution of Skagit Spring Fingerling reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	21	2	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	63	3	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	38	4	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	4	5	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	33	2	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	467	2,3	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	904	2,3,4	1.0%	0.0%	0.0%	0.4%	0.7%	1.5%	4.0%	0.0%	8.7%	0.6%	1.7%	0.0%	0.0%	0.0%	0.0%	0.9%	7.3%	0.0%	0.6%	0.0%	72.7%
1998	674	2,3,4,5	1.9%	0.0%	0.0%	0.0%	0.7%	0.0%	4.9%	0.0%	9.3%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.4%	2.5%	0.0%	1.2%	0.0%	78.3%
1999	1712	2,3,4,5	0.5%	0.1%	0.0%	0.3%	0.7%	2.0%	6.0%	0.0%	4.6%	0.0%	0.1%	0.0%	0.3%	0.0%	0.0%	0.5%	1.6%	0.0%	1.0%	0.0%	82.3%
2000	1109	2,3,4,5	1.5%	0.0%	0.4%	0.0%	0.5%	6.2%	6.9%	0.0%	9.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	2.4%	0.0%	0.1%	0.0%	72.8%
2001	1811	2,3,4,5	1.3%	0.1%	0.3%	0.2%	0.8%	5.6%	3.8%	0.0%	5.4%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.2%	4.3%	0.0%	0.5%	0.0%	77.3%
2002	1746	2,3,4,5	2.5%	0.0%	0.5%	0.5%	0.7%	6.7%	4.5%	0.0%	6.8%	0.0%	0.1%	0.0%	0.3%	0.0%	0.1%	0.0%	2.5%	0.0%	0.6%	0.0%	74.3%
2003	673	2,3,4,5	2.2%	0.0%	0.9%	1.2%	0.7%	18.3%	0.7%	0.0%	5.3%	0.0%	0.1%	0.0%	1.3%	0.0%	0.0%	0.1%	1.2%	0.0%	0.7%	0.0%	67.0%
2004	1101	2,3,4,5	0.0%	0.0%	0.0%	0.5%	0.0%	11.7%	2.6%	0.0%	6.9%	0.0%	0.0%	0.0%	2.3%	0.0%	0.0%	0.0%	1.6%	0.0%	1.4%	0.0%	73.0%
2005	1234	2,3,4,5	1.3%	0.1%	0.0%	0.0%	1.4%	11.0%	5.3%	0.0%	5.4%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.3%	3.7%	70.7%
2006	1718	2,3,4,5	0.3%	0.1%	0.0%	0.2%	0.5%	6.3%	2.8%	0.0%	5.8%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.5%	2.3%	0.0%	1.0%	19.3%	60.9%
2007	2478	2,3,4,5	0.3%	0.1%	0.0%	0.0%	0.0%	9.1%	6.5%	0.0%	6.6%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.3%	2.8%	0.0%	1.3%	19.7%	52.5%
2008	1450	2,3,4,5	0.3%	0.0%	0.0%	0.0%	0.3%	3.7%	5.9%	0.0%	4.7%	0.0%	0.2%	0.0%	0.7%	0.0%	0.0%	1.2%	6.0%	0.0%	12.8%	15.0%	49.2%
2009	923	2,3,4,5	0.8%	0.0%	0.0%	0.0%	0.0%	2.7%	5.1%	0.0%	3.7%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	6.1%	0.0%	19.9%	10.3%	50.5%
2010	1537	3,4,5	0.1%	0.0%	0.0%	0.0%	1.6%	2.0%	3.3%	0.0%	2.5%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.2%	1.4%	0.0%	18.0%	11.9%	58.8%
1979-2010	1362		1.0%	0.0%	0.1%	0.2%	0.6%	6.2%	4.4%	0.0%	6.1%	0.0%	0.2%	0.0%	0.5%	0.0%	0.0%	0.3%	3.0%	0.0%	4.2%	5.7%	67.2%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1996-1998	789		1.5%	0.0%	0.0%	0.2%	0.7%	0.8%	4.4%	0.0%	9.0%	0.3%	1.1%	0.0%	0.0%	0.0%	0.0%	0.7%	4.9%	0.0%	0.9%	0.0%	75.5%
1999-2010	1458		0.9%	0.0%	0.2%	0.2%	0.6%	7.1%	4.4%	0.0%	5.6%	0.0%	0.1%	0.0%	0.6%	0.0%	0.0%	0.3%	2.7%	0.0%	4.8%	6.7%	65.8%

Appendix C.62. Percent distribution of Skagit Spring Fingerling total fishing mortalities among fisheries and escapement.

	Estimated		AABM							ISBM													
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	31	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	69	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	38	4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	4	5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	79	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	552	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	977	2,3,4	1.2%	0.0%	0.0%	0.4%	0.9%	1.6%	4.3%	0.0%	11.0%	0.5%	2.8%	0.0%	0.0%	0.0%	0.0%	0.8%	8.7%	0.0%	0.5%	0.0%	67.2%
1998	771	2,3,4,5	1.9%	0.0%	0.0%	0.0%	1.3%	0.0%	5.1%	0.0%	16.3%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.4%	4.7%	0.0%	1.2%	0.0%	68.5%
1999	1799	2,3,4,5	0.9%	0.2%	0.0%	0.3%	0.9%	2.0%	6.5%	0.0%	6.4%	0.0%	0.1%	0.0%	0.4%	0.0%	0.0%	0.5%	2.4%	0.0%	1.0%	0.0%	78.3%
2000	1235	2,3,4,5	1.9%	0.0%	0.6%	0.0%	0.7%	6.5%	7.4%	0.0%	13.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.1%	4.0%	0.0%	0.1%	0.0%	65.3%
2001	1957	2,3,4,5	1.7%	0.1%	0.4%	0.3%	1.0%	5.5%	4.2%	0.0%	6.9%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.2%	7.5%	0.0%	0.5%	0.0%	71.5%
2002	1830	2,3,4,5	2.8%	0.0%	0.5%	0.5%	0.9%	6.7%	5.1%	0.0%	8.0%	0.0%	0.1%	0.0%	0.3%	0.0%	0.1%	0.0%	3.3%	0.0%	0.5%	0.0%	70.9%
2003	707	2,3,4,5	2.4%	0.0%	1.0%	1.3%	1.0%	18.7%	1.0%	0.0%	6.8%	0.0%	0.1%	0.0%	1.4%	0.0%	0.0%	0.1%	1.7%	0.0%	0.7%	0.0%	63.8%
2004	1179	2,3,4,5	0.0%	0.0%	0.0%	0.5%	0.0%	12.0%	3.1%	0.0%	9.8%	0.0%	0.0%	0.0%	2.7%	0.0%	0.0%	0.0%	2.5%	0.0%	1.4%	0.0%	68.2%
2005	1324	2,3,4,5	1.6%	0.2%	0.0%	0.0%	2.0%	11.1%	6.2%	0.0%	7.7%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.3%	4.1%	65.9%
2006	1882	2,3,4,5	0.4%	0.1%	0.0%	0.3%	0.6%	6.3%	3.2%	0.0%	8.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.5%	3.2%	0.0%	1.0%	20.8%	55.6%
2007	2665	2,3,4,5	0.4%	0.2%	0.0%	0.0%	0.0%	8.9%	6.8%	0.0%	7.8%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.3%	3.5%	0.0%	1.3%	21.3%	48.8%
2008	1571	2,3,4,5	0.4%	0.0%	0.0%	0.0%	0.3%	3.6%	6.6%	0.0%	5.5%	0.0%	0.3%	0.0%	0.8%	0.0%	0.0%	1.1%	7.8%	0.0%	12.2%	16.0%	45.4%
2009	1024	2,3,4,5	0.9%	0.0%	0.0%	0.0%	0.0%	2.6%	5.6%	0.0%	5.4%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.0%	8.8%	0.0%	19.2%	10.9%	45.5%
2010	1613	3,4,5	0.1%	0.0%	0.0%	0.0%	2.0%	2.0%	3.8%	0.0%	3.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.2%	1.7%	0.0%	17.7%	13.2%	56.0%
1979-2010	1467		1.2%	0.1%	0.2%	0.3%	0.8%	6.3%	4.9%	0.0%	8.3%	0.0%	0.3%	0.0%	0.6%	0.0%	0.0%	0.3%	4.3%	0.0%	4.1%	6.2%	62.2%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1996-1998	874		1.6%	0.0%	0.0%	0.2%	1.1%	0.8%	4.7%	0.0%	13.6%	0.3%	1.7%	0.0%	0.0%	0.0%	0.0%	0.6%	6.7%	0.0%	0.8%	0.0%	67.9%
1999-2010	1566		1.1%	0.1%	0.2%	0.3%	0.8%	7.2%	5.0%	0.0%	7.4%	0.0%	0.1%	0.0%	0.7%	0.0%	0.0%	0.2%	3.9%	0.0%	4.7%	7.2%	61.3%

Appendix C.63. Percent distribution of Skagit Spring Yearling reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			Esc.
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	3	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	60	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	120	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	6.7%	0.0%	0.0%	29.2%	0.0%	26.7%	0.0%	0.0%	0.0%	0.0%	10.0%	15.8%	0.0%	0.0%	0.0%	11.7%
1986	211	2,3,4,5	1.4%	0.0%	0.0%	0.0%	0.0%	6.2%	5.7%	6.2%	35.5%	4.3%	9.5%	0.0%	0.0%	0.0%	0.0%	3.3%	7.6%	0.0%	0.0%	0.0%	20.4%
1987	109	2,3,4,5	0.0%	0.0%	0.0%	4.6%	0.0%	3.7%	0.0%	0.0%	10.1%	0.0%	11.9%	0.0%	1.8%	0.0%	0.0%	24.8%	20.2%	0.0%	0.0%	0.0%	22.9%
1988	509	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	9.6%	0.4%	14.5%	0.0%	13.6%	0.0%	1.8%	0.0%	0.0%	20.6%	14.5%	0.0%	0.0%	0.0%	23.2%
1989	760	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	3.4%	1.8%	0.0%	17.5%	0.8%	3.4%	0.0%	4.3%	0.0%	0.0%	12.4%	8.4%	0.0%	18.0%	0.0%	29.9%
1990	675	3,4,5	0.0%	0.0%	0.0%	0.0%	1.0%	4.9%	8.7%	3.1%	11.1%	0.4%	5.8%	0.0%	3.4%	0.0%	0.0%	13.5%	22.7%	0.0%	1.9%	0.0%	23.4%
1991	483	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	30	2,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	376	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	732	4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	143	2,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	135	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	448	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	10.3%	0.0%	19.6%	0.0%	2.5%	0.0%	0.0%	0.0%	0.0%	1.3%	21.0%	0.0%	1.1%	0.0%	42.4%
1998	1118	2,3,4,5	0.5%	0.1%	0.0%	0.0%	2.8%	1.3%	10.1%	0.0%	8.9%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	2.4%	16.7%	0.0%	0.7%	0.0%	56.4%
1999	2376	2,3,4,5	0.5%	0.0%	0.0%	0.0%	0.3%	4.8%	4.3%	0.0%	7.4%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.1%	8.7%	0.0%	1.2%	0.0%	72.4%
2000	522	2,3,4,5	0.8%	0.0%	0.0%	0.0%	0.4%	7.1%	3.1%	0.0%	15.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	15.5%	0.0%	0.6%	0.0%	56.5%
2001	251	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	3.6%	2.4%	0.0%	12.0%	0.0%	0.0%	0.0%	3.2%	0.0%	0.0%	0.0%	10.8%	0.0%	2.0%	0.0%	66.1%
2002	269	2,3,4,5	1.1%	0.0%	0.0%	0.0%	0.0%	1.1%	14.1%	0.0%	14.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	8.6%	0.0%	0.7%	0.0%	59.5%
2003	890	2,3,4,5	0.0%	0.0%	0.0%	0.9%	0.3%	20.3%	3.8%	0.0%	9.4%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.6%	7.5%	0.0%	0.2%	0.0%	56.7%
2004	1582	2,3,4,5	0.2%	0.0%	0.0%	0.0%	0.4%	13.0%	3.7%	0.0%	5.4%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.2%	4.0%	0.0%	0.8%	0.1%	71.4%
2005	1157	2,3,4,5	1.0%	0.0%	0.0%	0.2%	0.0%	7.6%	5.3%	0.0%	10.4%	0.0%	0.3%	0.0%	0.3%	0.0%	0.3%	0.1%	6.3%	0.0%	1.0%	6.6%	60.8%
2006	717	2,3,4,5	0.4%	0.0%	0.0%	0.0%	0.0%	8.8%	6.0%	0.0%	10.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.6%	2.8%	0.0%	1.1%	33.6%	35.8%
2007	759	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	8.2%	0.0%	4.3%	0.0%	0.0%	0.0%	0.5%	0.0%	0.3%	1.1%	14.4%	0.0%	0.4%	24.5%	43.7%
2008	709	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	3.5%	0.0%	5.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	9.9%	0.0%	12.4%	20.6%	45.7%
2009	365	2,3,4,5	0.8%	0.0%	0.0%	0.0%	1.1%	1.6%	12.3%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	0.3%	7.7%	0.0%	18.9%	12.9%	42.7%
2010	414	3,4,5	0.2%	0.0%	0.0%	0.0%	0.7%	0.0%	2.4%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.8%	0.0%	17.1%	30.0%	41.8%
1979-2010	698		0.4%	0.0%	0.0%	0.3%	0.4%	5.1%	5.8%	0.5%	12.1%	0.3%	3.7%	0.0%	0.9%	0.0%	0.1%	4.7%	11.5%	0.0%	3.9%	6.4%	44.2%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	397		0.2%	0.0%	0.0%	0.8%	0.2%	4.4%	4.3%	1.6%	19.7%	0.9%	11.8%	0.0%	1.9%	0.0%	0.0%	14.1%	14.9%	0.0%	3.3%	0.0%	21.9%
1996-1998	783		0.3%	0.0%	0.0%	0.0%	1.4%	1.5%	10.2%	0.0%	14.2%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	1.9%	18.9%	0.0%	0.9%	0.0%	49.4%
1999-2010	834		0.4%	0.0%	0.0%	0.1%	0.3%	6.0%	5.8%	0.0%	7.9%	0.0%	0.0%	0.0%	0.6%	0.0%	0.1%	0.4%	8.6%	0.0%	4.7%	10.7%	54.4%

Appendix C.64. Percent distribution of Skagit Spring Yearling total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	7	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	76	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	131	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	6.9%	0.0%	0.0%	29.8%	0.0%	25.2%	0.0%	0.0%	0.0%	0.0%	9.2%	18.3%	0.0%	0.0%	0.0%	10.7%
1986	228	2,3,4,5	1.8%	0.0%	0.0%	0.0%	0.0%	6.1%	5.7%	6.1%	36.0%	3.9%	9.2%	0.0%	0.0%	0.0%	0.0%	3.1%	9.2%	0.0%	0.0%	0.0%	18.9%
1987	167	2,3,4,5	0.0%	0.0%	0.0%	4.2%	0.0%	3.0%	0.0%	0.0%	8.4%	0.0%	9.0%	0.0%	1.2%	0.0%	0.0%	19.2%	40.1%	0.0%	0.0%	0.0%	15.0%
1988	589	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	9.2%	0.5%	18.3%	0.0%	12.4%	0.0%	2.0%	0.0%	0.0%	19.2%	16.1%	0.0%	0.0%	0.0%	20.0%
1989	867	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	3.9%	1.8%	0.0%	21.1%	0.8%	3.3%	0.0%	4.6%	0.0%	0.0%	11.2%	10.3%	0.0%	16.7%	0.0%	26.2%
1990	733	3,4,5	0.0%	0.0%	0.0%	0.0%	1.1%	5.0%	8.6%	3.3%	12.0%	0.4%	5.5%	0.0%	3.7%	0.0%	0.0%	12.8%	24.3%	0.0%	1.8%	0.0%	21.6%
1991	502	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	102	2,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	422	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	754	4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	179	2,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	188	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	624	2,3,4	0.3%	0.0%	0.0%	0.0%	1.1%	2.9%	9.0%	0.0%	22.9%	0.0%	3.5%	0.0%	0.0%	0.0%	0.0%	1.0%	28.0%	0.0%	0.8%	0.0%	30.4%
1998	1229	2,3,4,5	0.7%	0.2%	0.0%	0.0%	3.4%	1.1%	9.9%	0.0%	10.3%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	2.3%	19.8%	0.0%	0.7%	0.0%	51.3%
1999	2490	2,3,4,5	0.7%	0.0%	0.0%	0.0%	0.4%	4.8%	4.5%	0.0%	8.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.1%	11.2%	0.0%	1.2%	0.0%	69.1%
2000	568	2,3,4,5	0.7%	0.0%	0.0%	0.0%	0.5%	6.7%	3.2%	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	18.8%	0.0%	0.5%	0.0%	51.9%
2001	333	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.7%	2.4%	0.0%	20.7%	0.0%	0.0%	0.0%	2.7%	0.0%	0.0%	0.0%	20.1%	0.0%	1.5%	0.0%	49.8%
2002	318	2,3,4,5	0.9%	0.0%	0.0%	0.0%	0.0%	0.9%	15.1%	0.0%	19.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	11.6%	0.0%	0.6%	0.0%	50.3%
2003	966	2,3,4,5	0.0%	0.0%	0.0%	0.9%	0.5%	19.8%	4.9%	0.0%	11.3%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.5%	9.5%	0.0%	0.2%	0.0%	52.3%
2004	1655	2,3,4,5	0.2%	0.0%	0.0%	0.0%	0.6%	13.2%	4.2%	0.0%	6.4%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.2%	5.3%	0.0%	0.8%	0.1%	68.3%
2005	1245	2,3,4,5	1.1%	0.0%	0.0%	0.2%	0.0%	7.5%	5.8%	0.0%	12.0%	0.0%	0.3%	0.0%	0.2%	0.0%	0.2%	0.1%	8.0%	0.0%	0.9%	7.1%	56.5%
2006	819	2,3,4,5	0.5%	0.0%	0.0%	0.0%	0.0%	8.4%	6.5%	0.0%	13.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.5%	4.2%	0.0%	1.0%	33.9%	31.4%
2007	841	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	8.3%	0.0%	5.2%	0.0%	0.0%	0.0%	0.5%	0.0%	0.2%	1.0%	16.9%	0.0%	0.4%	25.7%	39.5%
2008	770	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	3.9%	0.0%	6.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	12.2%	0.0%	11.6%	21.8%	42.1%
2009	396	2,3,4,5	1.0%	0.0%	0.0%	0.0%	1.3%	1.5%	13.4%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%	0.3%	9.8%	0.0%	17.9%	13.6%	39.4%
2010	443	3,4,5	0.2%	0.0%	0.0%	0.0%	0.9%	0.0%	2.7%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.4%	0.0%	16.3%	32.3%	39.1%
1979-2010	771		0.4%	0.0%	0.0%	0.3%	0.5%	5.0%	6.0%	0.5%	14.0%	0.3%	3.4%	0.0%	0.9%	0.0%	0.1%	4.1%	15.1%	0.0%	3.6%	6.7%	39.2%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	452		0.3%	0.0%	0.0%	0.7%	0.2%	4.5%	4.2%	1.7%	20.9%	0.9%	10.8%	0.0%	1.9%	0.0%	0.0%	12.4%	19.7%	0.0%	3.1%	0.0%	18.7%
1996-1998	926		0.5%	0.1%	0.0%	0.0%	2.3%	2.0%	9.5%	0.0%	16.6%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	1.6%	23.9%	0.0%	0.7%	0.0%	40.9%
1999-2010	904		0.4%	0.0%	0.0%	0.1%	0.4%	5.8%	6.2%	0.0%	10.1%	0.0%	0.0%	0.0%	0.5%	0.0%	0.1%	0.4%	11.3%	0.0%	4.4%	11.2%	49.1%

Appendix C.65. Percent distribution of Skykomish Fall Fingerling (Snohomish Wild) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM														Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal				
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1998	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1999	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2000	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	1	2	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	103	2,3	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	569	2,3,4	0.4%	0.0%	0.0%	0.0%	1.6%	16.7%	3.2%	0.0%	7.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.5%	5.8%	0.0%	0.0%	0.0%	64.5%
2005	511	2,3,4,5	0.8%	0.0%	0.0%	0.4%	0.0%	18.4%	8.0%	0.0%	5.1%	0.0%	0.6%	0.0%	2.9%	0.0%	0.4%	0.0%	2.2%	0.0%	0.0%	0.0%	61.3%
2006	584	2,3,4,5	0.9%	0.0%	0.0%	0.3%	0.0%	14.6%	3.9%	0.0%	6.5%	0.0%	0.2%	0.0%	4.5%	0.0%	0.0%	1.0%	5.0%	0.0%	0.0%	0.0%	63.2%
2007	1098	2,3,4,5	0.5%	0.0%	0.0%	0.2%	1.2%	15.2%	6.3%	0.0%	3.9%	0.0%	0.0%	0.0%	2.8%	0.0%	0.0%	1.5%	5.8%	0.0%	0.0%	0.0%	62.6%
2008	720	2,3,4,5	0.3%	0.0%	0.0%	0.0%	0.0%	9.0%	2.6%	0.0%	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	6.3%	0.0%	0.0%	0.0%	77.8%
2009	328	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	4.3%	0.0%	4.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	12.2%	0.0%	0.0%	0.0%	76.2%
2010	389	2,3,4,5	0.0%	0.3%	0.0%	0.0%	0.0%	2.6%	2.1%	0.0%	2.1%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	1.8%	5.9%	0.0%	0.0%	2.6%	82.0%
1979-2010	600		0.4%	0.0%	0.0%	0.1%	0.4%	11.2%	4.3%	0.0%	4.5%	0.0%	0.1%	0.0%	1.8%	0.0%	0.1%	0.9%	6.2%	0.0%	0.0%	0.4%	69.6%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1996-1998	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1999-2010	600		0.4%	0.0%	0.0%	0.1%	0.4%	11.2%	4.3%	0.0%	4.5%	0.0%	0.1%	0.0%	1.8%	0.0%	0.1%	0.9%	6.2%	0.0%	0.0%	0.4%	69.6%

Appendix C.66. Percent distribution of Skykomish Fall Fingerling (Snohomish Wild) total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM														Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal				
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1998	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1999	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2000	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	20	2	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	131	2,3	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	612	2,3,4	0.5%	0.0%	0.0%	0.0%	2.1%	16.3%	3.9%	0.0%	8.5%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.5%	7.7%	0.0%	0.0%	0.0%	60.0%
2005	551	2,3,4,5	0.9%	0.0%	0.0%	0.4%	0.0%	18.3%	9.1%	0.0%	6.7%	0.0%	0.7%	0.0%	3.3%	0.0%	0.5%	0.0%	3.3%	0.0%	0.0%	0.0%	56.8%
2006	652	2,3,4,5	1.2%	0.0%	0.0%	0.3%	0.0%	14.1%	4.3%	0.0%	9.8%	0.0%	0.2%	0.0%	5.1%	0.0%	0.0%	0.9%	7.5%	0.0%	0.0%	0.0%	56.6%
2007	1155	2,3,4,5	0.5%	0.0%	0.0%	0.2%	1.4%	15.1%	6.7%	0.0%	4.8%	0.0%	0.0%	0.0%	3.2%	0.0%	0.0%	1.6%	7.2%	0.0%	0.0%	0.0%	59.5%
2008	747	2,3,4,5	0.3%	0.0%	0.0%	0.0%	0.0%	9.1%	3.1%	0.0%	3.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	8.2%	0.0%	0.0%	0.0%	75.0%
2009	354	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	4.8%	0.0%	4.8%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	16.1%	0.0%	0.0%	0.0%	70.6%
2010	430	2,3,4,5	0.0%	0.2%	0.0%	0.0%	0.0%	2.6%	2.6%	0.0%	4.2%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	1.9%	10.9%	0.0%	0.0%	2.8%	74.2%
1979-2010	643		0.5%	0.0%	0.0%	0.1%	0.5%	11.1%	4.9%	0.0%	6.0%	0.0%	0.1%	0.0%	2.0%	0.0%	0.1%	0.9%	8.7%	0.0%	0.0%	0.4%	64.7%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1996-1998	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1999-2010	643		0.5%	0.0%	0.0%	0.1%	0.5%	11.1%	4.9%	0.0%	6.0%	0.0%	0.1%	0.0%	2.0%	0.0%	0.1%	0.9%	8.7%	0.0%	0.0%	0.4%	64.7%

Appendix C.67. Percent distribution of Sooes Fall Fingerling (Washington Coastal Wild) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM														Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal				
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	13	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	26	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	167	2,3,4	6.6%	6.6%	0.0%	0.0%	0.0%	1.8%	7.8%	0.0%	0.0%	0.0%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	71.3%
1990	140	3,4,5	10.0%	2.1%	4.3%	14.3%	0.0%	17.9%	0.0%	0.0%	7.1%	1.4%	2.9%	0.0%	1.4%	0.0%	3.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	35.0%
1991	345	2,4,5,6	11.9%	0.0%	0.0%	9.9%	0.0%	5.2%	0.0%	0.0%	0.0%	0.0%	3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	4.9%	0.0%	0.0%	0.0%	0.0%	64.3%
1992	295	2,3,5,6	8.5%	0.0%	0.0%	9.5%	0.0%	19.3%	1.7%	0.0%	1.0%	2.0%	3.4%	0.0%	0.3%	0.0%	0.7%	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%	51.9%
1993	237	2,3,4,6	4.6%	0.0%	0.0%	7.6%	2.1%	16.0%	0.0%	0.0%	0.0%	2.1%	2.1%	0.0%	0.4%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	64.1%
1994	203	2,3,4,5	16.7%	3.9%	3.9%	10.8%	1.0%	7.9%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	54.7%
1995	153	2,3,4,5,6	8.5%	0.0%	0.0%	4.6%	0.0%	9.8%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	0.0%	0.0%	73.9%
1996	206	2,3,4,5,6	8.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	90.3%
1997	289	2,3,4,5,6	10.4%	0.0%	5.2%	5.2%	0.0%	0.0%	2.8%	0.0%	1.4%	0.7%	0.3%	0.0%	1.0%	0.0%	0.0%	2.8%	0.0%	0.0%	20.8%	0.0%	0.0%	49.5%
1998	267	2,3,4,5,6	9.0%	0.0%	1.5%	17.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	72.3%
1999	226	2,3,4,5,6	11.9%	0.0%	11.9%	6.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	68.6%
2000	84	2,3,4,5,6	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%	10.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	86.9%
2001	295	2,3,4,5,6	6.1%	0.0%	2.0%	0.0%	0.0%	0.0%	2.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	88.5%
2002	534	2,3,4,5,6	10.7%	0.2%	1.3%	2.8%	2.8%	0.6%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	80.0%
2003	746	2,3,4,5,6	11.7%	0.1%	0.0%	4.7%	2.3%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.5%	0.0%	25.5%	0.0%	0.0%	53.5%
2004	866	2,3,4,5,6	16.9%	0.5%	2.1%	14.4%	0.0%	0.8%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.3%	0.0%	0.9%	0.0%	0.0%	62.0%
2005	478	2,3,4,5,6	25.9%	0.0%	2.3%	24.5%	7.1%	1.0%	0.0%	0.0%	1.7%	0.0%	0.0%	0.0%	0.8%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	34.7%
2006	219	2,3,4,5,6	22.4%	3.7%	2.7%	26.0%	1.8%	1.4%	2.7%	0.0%	5.0%	0.0%	0.0%	0.0%	0.5%	0.0%	1.4%	0.0%	1.8%	0.0%	0.0%	0.0%	0.0%	30.6%
2007	68	2,3,4,5,6	11.8%	0.0%	0.0%	17.6%	10.3%	0.0%	0.0%	0.0%	5.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	54.4%
2008	91	3,4,5,6	5.5%	0.0%	0.0%	13.2%	13.2%	0.0%	11.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	54.9%
2009	473	2,4,5,6	9.5%	0.0%	0.6%	7.2%	2.7%	0.0%	4.0%	0.0%	1.5%	0.0%	0.0%	0.0%	2.1%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	71.7%
2010	390	2,3,5,6	2.3%	0.0%	1.8%	4.9%	0.5%	1.0%	1.0%	0.0%	3.3%	0.0%	0.0%	0.0%	0.3%	0.0%	3.3%	0.3%	0.8%	0.0%	0.0%	0.0%	0.0%	80.5%
1979-2010	308		10.4%	0.8%	1.9%	9.1%	2.0%	3.8%	2.1%	0.0%	1.4%	0.3%	0.9%	0.0%	0.4%	0.0%	0.6%	0.2%	0.5%	0.0%	2.3%	0.0%	63.3%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	220		9.5%	1.8%	1.2%	8.1%	0.4%	11.1%	1.4%	0.0%	1.2%	0.9%	2.7%	0.0%	0.3%	0.0%	0.6%	0.0%	1.1%	0.0%	0.4%	0.0%	59.3%
1996-1998	254		9.4%	0.0%	2.2%	7.5%	0.0%	0.0%	0.9%	0.0%	0.5%	0.2%	0.3%	0.0%	0.3%	0.0%	0.2%	0.9%	0.0%	0.0%	6.9%	0.0%	70.7%
1999-2010	372		11.2%	0.4%	2.3%	10.2%	3.4%	0.4%	2.8%	0.0%	1.7%	0.0%	0.0%	0.0%	0.5%	0.0%	0.7%	0.1%	0.3%	0.0%	2.2%	0.0%	63.9%

Appendix C.68. Percent distribution of Sooes Fall Fingerling (Washington Coastal Wild) total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM														Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal				
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	17	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	32	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	230	2,3,4	8.3%	20.4%	0.4%	2.6%	0.0%	3.9%	6.1%	0.0%	0.4%	0.0%	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%	51.7%
1990	168	3,4,5	11.9%	6.0%	4.2%	15.5%	0.0%	17.9%	0.0%	0.0%	6.5%	1.8%	2.4%	0.0%	1.8%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	29.2%
1991	374	2,4,5,6	13.6%	0.0%	0.3%	10.4%	0.0%	7.2%	0.0%	0.0%	0.3%	0.3%	3.5%	0.0%	0.0%	0.0%	0.0%	0.0%	5.1%	0.0%	0.0%	0.0%	59.4%
1992	325	2,3,5,6	10.8%	0.3%	0.3%	10.2%	0.0%	20.6%	1.5%	0.0%	1.2%	2.2%	3.1%	0.0%	0.3%	0.0%	0.6%	0.0%	1.8%	0.0%	0.0%	0.0%	47.1%
1993	253	2,3,4,6	7.1%	0.4%	0.0%	7.9%	2.0%	17.0%	0.0%	0.0%	0.0%	2.0%	2.0%	0.0%	0.4%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	60.1%
1994	244	2,3,4,5	18.0%	14.8%	3.3%	9.0%	0.8%	7.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	45.5%
1995	179	2,3,4,5,6	15.1%	0.0%	0.0%	5.6%	0.0%	11.7%	0.0%	0.0%	0.0%	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	63.1%
1996	226	2,3,4,5,6	15.5%	0.0%	0.0%	0.9%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	82.3%
1997	312	2,3,4,5,6	11.9%	0.0%	5.8%	5.4%	0.0%	0.0%	2.6%	0.0%	1.6%	0.6%	0.6%	0.0%	1.0%	0.0%	0.0%	3.8%	0.0%	0.0%	20.8%	0.0%	45.8%
1998	280	2,3,4,5,6	10.4%	0.0%	1.8%	18.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	68.9%
1999	236	2,3,4,5,6	13.1%	0.0%	13.1%	6.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	65.7%
2000	89	2,3,4,5,6	0.0%	0.0%	5.6%	0.0%	0.0%	0.0%	12.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	82.0%
2001	314	2,3,4,5,6	9.2%	0.0%	2.9%	0.0%	0.0%	0.0%	2.5%	0.0%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	83.1%
2002	567	2,3,4,5,6	12.9%	0.2%	1.6%	3.4%	4.1%	0.7%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	75.3%
2003	801	2,3,4,5,6	13.7%	0.1%	0.0%	5.4%	3.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.7%	0.0%	25.2%	0.0%	49.8%
2004	923	2,3,4,5,6	18.7%	0.8%	2.2%	15.8%	0.0%	0.8%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.4%	0.0%	0.9%	0.0%	58.2%
2005	512	2,3,4,5,6	26.2%	0.0%	2.3%	24.8%	8.8%	1.0%	0.0%	0.0%	1.8%	0.0%	0.0%	0.0%	0.8%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	32.4%
2006	234	2,3,4,5,6	22.6%	4.3%	2.6%	26.1%	2.1%	1.7%	3.0%	0.0%	5.1%	0.0%	0.0%	0.0%	0.4%	0.0%	1.3%	0.0%	2.1%	0.0%	0.0%	0.0%	28.6%
2007	90	2,3,4,5,6	11.1%	0.0%	0.0%	16.7%	17.8%	0.0%	0.0%	0.0%	13.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	41.1%
2008	108	3,4,5,6	11.1%	0.0%	0.0%	15.7%	13.0%	0.0%	10.2%	0.0%	0.9%	0.0%	0.0%	0.0%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	46.3%
2009	500	2,4,5,6	9.8%	0.0%	1.4%	7.4%	3.2%	0.0%	4.4%	0.0%	3.0%	0.0%	0.0%	0.0%	2.0%	0.0%	0.8%	0.0%	0.2%	0.0%	0.0%	0.0%	67.8%
2010	406	2,3,5,6	3.0%	0.0%	2.2%	5.2%	0.7%	1.0%	1.2%	0.0%	4.4%	0.0%	0.0%	0.0%	0.2%	0.0%	3.4%	0.2%	1.0%	0.0%	0.0%	0.0%	77.3%
1979-2010	335		12.5%	2.1%	2.3%	9.7%	2.5%	4.1%	2.1%	0.0%	2.0%	0.3%	0.8%	0.0%	0.4%	0.0%	0.6%	0.3%	0.6%	0.0%	2.3%	0.0%	57.3%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	253		12.1%	6.0%	1.2%	8.7%	0.4%	12.2%	1.1%	0.0%	1.2%	1.0%	2.5%	0.0%	0.4%	0.0%	0.5%	0.1%	1.3%	0.0%	0.4%	0.0%	50.9%
1996-1998	273		12.6%	0.0%	2.5%	8.4%	0.0%	0.1%	0.9%	0.0%	0.5%	0.2%	0.4%	0.0%	0.3%	0.0%	0.1%	1.3%	0.0%	0.0%	6.9%	0.0%	65.7%
1999-2010	398		12.6%	0.4%	2.8%	10.6%	4.4%	0.4%	3.0%	0.0%	2.8%	0.0%	0.0%	0.0%	0.5%	0.0%	0.8%	0.1%	0.4%	0.0%	2.2%	0.0%	59.0%

Appendix C.69. Percent distribution of Spring Creek Tule (Spring Creek Hatchery) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	4508	2,3,4,5	0.0%	0.0%	0.0%	0.1%	0.0%	23.6%	0.1%	0.2%	1.2%	0.7%	2.8%	0.0%	16.5%	0.6%	7.5%	1.4%	5.4%	0.0%	21.6%	0.0%	18.4%
1980	5944	2,3,4,5	0.1%	0.0%	0.0%	0.1%	0.0%	26.0%	0.1%	0.1%	2.7%	0.5%	1.1%	0.0%	23.4%	1.9%	5.2%	0.7%	4.9%	0.0%	20.9%	0.0%	12.5%
1981	6529	2,3,4,5	0.0%	0.0%	0.0%	0.1%	0.0%	21.2%	0.1%	0.1%	1.4%	0.2%	2.0%	0.0%	23.2%	0.3%	10.8%	0.5%	1.9%	0.0%	20.0%	0.0%	18.3%
1982	4315	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	22.1%	0.0%	0.0%	1.0%	0.5%	0.3%	0.0%	19.6%	0.1%	7.2%	1.1%	1.0%	0.0%	34.4%	0.0%	12.7%
1983	782	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	29.9%	0.5%	0.0%	1.2%	0.4%	0.0%	0.0%	8.4%	0.0%	4.0%	0.3%	5.8%	0.0%	19.9%	0.0%	29.7%
1984	1013	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	27.0%	0.4%	0.0%	0.0%	2.4%	1.3%	0.0%	5.8%	0.0%	1.0%	0.7%	3.8%	0.0%	26.0%	3.0%	28.7%
1985	1160	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	13.5%	0.7%	0.0%	0.0%	0.2%	0.2%	0.0%	14.0%	0.0%	2.4%	0.7%	1.4%	0.0%	26.7%	0.3%	40.0%
1986	325	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	23.1%	2.5%	0.0%	1.8%	2.8%	1.5%	0.0%	2.5%	0.0%	2.5%	0.9%	4.0%	0.0%	34.2%	1.2%	23.1%
1987	114	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	7.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.0%	0.0%	8.8%	17.5%	2.6%	0.0%	21.1%	8.8%	19.3%
1988	668	2,3,4,5	0.0%	0.0%	0.0%	0.4%	0.0%	22.2%	2.2%	0.0%	0.9%	0.3%	1.9%	0.0%	16.3%	0.0%	3.1%	1.5%	2.5%	0.0%	28.1%	4.2%	16.2%
1989	2054	2,3,4,5	0.0%	0.0%	0.0%	0.2%	0.0%	14.3%	3.3%	0.0%	0.4%	0.0%	0.4%	0.0%	24.5%	0.0%	3.3%	0.1%	1.6%	0.0%	34.1%	3.3%	14.5%
1990	2097	2,3,4,5	0.0%	0.0%	0.0%	0.2%	0.0%	17.6%	4.5%	0.3%	0.4%	0.3%	1.0%	0.0%	14.3%	0.0%	7.0%	0.3%	3.9%	0.0%	22.7%	2.2%	25.3%
1991	2600	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	13.0%	1.4%	0.0%	0.2%	0.3%	0.5%	0.0%	16.8%	0.0%	4.7%	0.5%	2.4%	0.0%	33.5%	3.8%	23.0%
1992	2818	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	12.0%	2.5%	0.2%	0.4%	0.3%	0.5%	0.0%	26.6%	0.0%	5.2%	0.0%	3.1%	0.0%	14.7%	3.5%	30.9%
1993	1109	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	17.7%	4.1%	0.0%	0.0%	0.0%	0.4%	0.0%	17.7%	0.0%	2.9%	0.0%	4.3%	0.0%	21.4%	3.2%	28.4%
1994	892	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	18.4%	3.8%	0.0%	0.0%	0.0%	0.8%	0.0%	3.5%	0.0%	0.0%	0.0%	0.8%	0.0%	30.4%	0.0%	42.4%
1995	882	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	6.9%	2.7%	0.0%	0.0%	0.0%	0.2%	0.0%	1.8%	0.0%	0.0%	0.3%	0.0%	0.0%	38.5%	0.0%	49.4%
1996	845	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.9%	0.0%	1.1%	0.0%	0.7%	0.0%	55.9%	1.4%	32.1%
1997	601	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	12.0%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	0.0%	1.3%	0.0%	2.8%	0.0%	24.1%	6.7%	45.1%
1998	744	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	1.7%	0.0%	0.3%	0.0%	15.7%	11.4%	66.1%
1999	1514	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	3.8%	0.0%	0.3%	0.0%	0.0%	0.0%	16.8%	0.0%	2.6%	0.0%	0.2%	0.0%	36.5%	6.4%	33.0%
2000	855	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%	4.9%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	0.0%	1.8%	0.0%	0.4%	0.0%	20.4%	6.5%	57.1%
2001	6191	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	3.4%	0.8%	0.0%	0.2%	0.0%	0.0%	0.0%	14.2%	0.0%	3.0%	0.0%	0.3%	0.0%	23.0%	2.1%	52.9%
2002	4312	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%	1.3%	0.0%	0.2%	0.0%	0.0%	0.0%	16.3%	0.0%	7.8%	0.0%	0.3%	0.0%	25.1%	2.5%	35.5%
2003	5999	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	10.4%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	10.7%	0.0%	3.5%	0.0%	0.1%	0.0%	22.5%	2.2%	48.2%
2004	6107	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	12.1%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%	0.0%	3.2%	0.0%	0.3%	0.0%	18.5%	1.8%	52.2%
2005	2351	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	24.0%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	6.6%	0.0%	1.0%	0.0%	0.0%	0.0%	27.4%	0.9%	37.3%
2006	699	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%	5.2%	0.0%	1.9%	0.0%	1.0%	0.0%	37.1%	1.0%	32.8%
2007	986	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	6.1%	3.1%	0.0%	0.4%	0.0%	0.0%	0.0%	2.7%	0.0%	3.9%	0.0%	0.9%	0.0%	38.7%	1.4%	42.7%
2008	2146	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	5.1%	6.2%	0.0%	0.3%	0.0%	0.0%	0.0%	6.4%	0.0%	2.8%	0.0%	1.4%	0.0%	41.6%	2.6%	33.6%
2009	2220	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.3%	1.1%	2.1%	0.0%	0.2%	0.0%	0.0%	0.0%	1.4%	0.0%	3.5%	0.0%	1.9%	0.0%	37.8%	2.6%	49.1%
2010	2580	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.2%	6.8%	4.1%	0.0%	0.6%	0.0%	0.0%	0.0%	20.4%	0.2%	7.5%	0.0%	1.2%	0.0%	54.8%	2.1%	2.1%
1979-2010	2374		0.0%	0.0%	0.0%	0.0%	0.0%	13.4%	2.3%	0.0%	0.4%	0.3%	0.5%	0.0%	11.8%	0.1%	3.8%	0.8%	1.9%	0.0%	29.0%	2.7%	32.9%
1979-1984	3848		0.0%	0.0%	0.0%	0.0%	0.0%	25.0%	0.2%	0.1%	1.2%	0.8%	1.2%	0.0%	16.1%	0.5%	5.9%	0.8%	3.8%	0.0%	23.8%	0.5%	20.1%
1985-1995	1338		0.0%	0.0%	0.0%	0.1%	0.0%	15.1%	2.5%	0.0%	0.4%	0.4%	0.7%	0.0%	13.8%	0.0%	3.6%	2.0%	2.4%	0.0%	27.8%	2.8%	28.4%
1996-1998	730		0.0%	0.0%	0.0%	0.0%	0.0%	4.1%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	4.7%	0.0%	1.4%	0.0%	1.3%	0.0%	31.9%	6.5%	47.8%
1999-2010	2997		0.0%	0.0%	0.0%	0.0%	0.0%	8.4%	3.2%	0.0%	0.2%	0.0%	0.0%	0.0%	9.6%	0.0%	3.5%	0.0%	0.7%	0.0%	31.9%	2.7%	39.7%

Appendix C.70. Percent distribution of Spring Creek Tule (Spring Creek Hatchery) total fishing mortalities among fisheries and escapement.

	Estimated		AABM							ISBM												
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	5337	2,3,4,5	0.0%	0.0%	0.0%	0.1%	0.0%	24.8%	0.1%	0.2%	1.1%	0.7%	2.5%	0.0%	18.1%	0.7%	7.3%	1.8%	6.2%	0.0%	20.9%	0.0%	15.5%
1980	7048	2,3,4,5	0.1%	0.0%	0.0%	0.1%	0.0%	26.7%	0.1%	0.1%	2.4%	0.5%	1.0%	0.0%	24.7%	2.2%	5.0%	0.8%	5.8%	0.0%	19.8%	0.0%	10.5%
1981	7431	2,3,4,5	0.0%	0.0%	0.0%	0.1%	0.0%	21.5%	0.1%	0.1%	1.3%	0.2%	1.9%	0.0%	24.3%	0.3%	10.8%	0.5%	2.2%	0.0%	20.6%	0.0%	16.1%
1982	4812	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	22.6%	0.0%	0.0%	1.0%	0.5%	0.2%	0.0%	22.1%	0.1%	7.1%	1.1%	1.1%	0.0%	32.7%	0.0%	11.4%
1983	897	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	30.9%	0.4%	0.0%	1.2%	0.4%	0.0%	0.0%	8.9%	0.0%	4.1%	0.3%	8.0%	0.0%	19.7%	0.0%	25.9%
1984	1182	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	26.3%	0.3%	0.0%	0.0%	2.3%	1.2%	0.0%	5.8%	0.0%	1.0%	0.9%	9.1%	0.0%	25.8%	2.6%	24.6%
1985	1261	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	14.5%	0.6%	0.0%	0.0%	0.2%	0.2%	0.0%	16.2%	0.0%	2.5%	0.7%	1.4%	0.0%	26.7%	0.2%	36.8%
1986	355	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	24.2%	2.5%	0.0%	2.0%	2.8%	1.7%	0.0%	2.5%	0.0%	2.5%	1.1%	4.8%	0.0%	33.5%	1.1%	21.1%
1987	154	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	9.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.9%	0.0%	7.8%	22.7%	5.2%	0.0%	18.8%	6.5%	14.3%
1988	900	2,3,4,5	0.0%	0.0%	0.0%	0.4%	0.0%	23.1%	2.0%	0.0%	2.0%	0.2%	1.7%	0.0%	15.8%	0.0%	2.8%	1.9%	4.8%	0.0%	29.3%	4.0%	12.0%
1989	2430	2,3,4,5	0.0%	0.0%	0.0%	0.2%	0.0%	16.1%	3.1%	0.0%	0.6%	0.0%	0.4%	0.0%	26.2%	0.0%	3.1%	0.2%	1.9%	0.0%	32.8%	3.2%	12.3%
1990	2536	2,3,4,5	0.0%	0.0%	0.0%	0.2%	0.0%	19.2%	4.4%	0.3%	0.6%	0.4%	0.9%	0.0%	15.0%	0.0%	6.8%	0.4%	5.5%	0.0%	23.3%	2.1%	20.9%
1991	3022	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	14.9%	1.4%	0.0%	0.3%	0.3%	0.5%	0.0%	18.3%	0.0%	4.6%	0.6%	3.2%	0.0%	32.3%	3.7%	19.8%
1992	3204	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	14.1%	2.4%	0.2%	0.5%	0.3%	0.5%	0.0%	28.8%	0.0%	5.1%	0.0%	3.4%	0.0%	14.1%	3.4%	27.2%
1993	1263	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	19.6%	4.1%	0.0%	0.0%	0.0%	0.3%	0.0%	19.2%	0.0%	2.9%	0.0%	5.5%	0.0%	20.5%	3.0%	24.9%
1994	992	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	21.2%	3.8%	0.0%	0.0%	0.0%	0.9%	0.0%	3.3%	0.0%	0.0%	0.0%	1.0%	0.0%	31.7%	0.0%	38.1%
1995	962	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%	2.8%	0.0%	0.0%	0.0%	0.4%	0.0%	1.9%	0.0%	0.0%	0.5%	0.0%	0.0%	39.9%	0.0%	45.3%
1996	932	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.7%	0.0%	1.2%	0.0%	0.9%	0.0%	57.3%	1.5%	29.1%
1997	645	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	14.6%	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%	5.1%	0.0%	1.2%	0.0%	3.6%	0.0%	24.0%	6.8%	42.0%
1998	869	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	1.8%	0.0%	1.0%	0.0%	21.6%	14.3%	56.6%
1999	1653	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	3.9%	0.0%	0.4%	0.0%	0.0%	0.0%	19.4%	0.0%	2.7%	0.0%	0.2%	0.0%	36.4%	6.5%	30.2%
2000	1013	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%	5.5%	0.0%	0.0%	0.0%	0.0%	0.0%	5.4%	0.0%	1.9%	0.0%	1.3%	0.0%	26.1%	7.6%	48.2%
2001	6735	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%	0.9%	0.0%	0.4%	0.0%	0.0%	0.0%	16.3%	0.0%	3.1%	0.0%	0.8%	0.0%	24.1%	2.2%	48.6%
2002	4741	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%	1.4%	0.0%	0.3%	0.0%	0.0%	0.0%	18.6%	0.0%	8.1%	0.0%	0.5%	0.0%	25.1%	2.5%	32.3%
2003	6454	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	10.5%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	12.1%	0.0%	3.7%	0.0%	0.2%	0.0%	23.1%	2.2%	44.8%
2004	6398	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	12.0%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	10.4%	0.0%	3.3%	0.0%	0.4%	0.0%	19.0%	1.9%	49.8%
2005	2464	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	24.2%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	7.2%	0.0%	1.1%	0.0%	0.0%	0.0%	27.8%	0.9%	35.6%
2006	753	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	16.6%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.8%	0.0%	1.9%	0.0%	1.2%	0.0%	38.0%	1.1%	30.4%
2007	1305	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	5.4%	3.1%	0.0%	1.2%	0.0%	0.0%	0.0%	2.7%	0.0%	3.7%	0.0%	3.7%	0.0%	46.4%	1.5%	32.3%
2008	2324	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.9%	6.8%	0.0%	0.4%	0.0%	0.0%	0.0%	7.4%	0.0%	2.9%	0.0%	1.6%	0.0%	42.3%	2.7%	31.0%
2009	2624	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.4%	1.1%	2.4%	0.0%	0.5%	0.0%	0.0%	0.0%	1.6%	0.0%	3.6%	0.0%	4.6%	0.0%	41.7%	2.7%	41.5%
2010	2975	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.3%	6.2%	4.6%	0.0%	0.8%	0.0%	0.0%	0.0%	22.2%	0.2%	7.3%	0.0%	1.4%	0.0%	53.2%	2.1%	1.8%
1979-2010	2677		0.0%	0.0%	0.0%	0.0%	0.0%	14.2%	2.5%	0.0%	0.5%	0.3%	0.4%	0.0%	12.8%	0.1%	3.8%	1.1%	2.8%	0.0%	29.6%	2.7%	29.1%
1979-1984	4451		0.0%	0.0%	0.0%	0.0%	0.0%	25.5%	0.2%	0.1%	1.2%	0.8%	1.1%	0.0%	17.3%	0.5%	5.9%	0.9%	5.4%	0.0%	23.3%	0.4%	17.3%
1985-1995	1553		0.0%	0.0%	0.0%	0.1%	0.0%	16.9%	2.5%	0.0%	0.5%	0.4%	0.7%	0.0%	14.7%	0.0%	3.5%	2.6%	3.3%	0.0%	27.5%	2.5%	24.8%
1996-1998	815		0.0%	0.0%	0.0%	0.0%	0.0%	5.4%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	4.5%	0.0%	1.4%	0.0%	1.8%	0.0%	34.3%	7.5%	42.6%
1999-2010	3287		0.0%	0.0%	0.0%	0.0%	0.1%	8.3%	3.6%	0.0%	0.3%	0.0%	0.0%	0.0%	10.8%	0.0%	3.6%	0.0%	1.3%	0.0%	33.6%	2.8%	35.5%

Appendix C.71. Percent distribution of South Puget Sound Fall Fingerling (Puget Sound Hatchery Fingerling) reported catch among fisheries and escapement.

	Estimated		AABM							ISBM													
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	993	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	426	2,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	957	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	2778	2,3,4	0.2%	0.1%	0.0%	0.1%	0.1%	22.4%	0.1%	2.4%	11.5%	0.8%	2.0%	0.0%	2.8%	0.0%	0.1%	17.9%	21.4%	0.0%	7.1%	0.0%	10.9%
1983	3851	2,3,4,5	0.1%	0.0%	0.0%	0.7%	0.1%	18.2%	0.3%	0.3%	4.2%	1.8%	3.2%	0.0%	1.6%	0.0%	0.1%	20.5%	28.1%	0.0%	6.7%	0.2%	14.2%
1984	3640	2,3,4,5	0.1%	0.2%	0.0%	0.7%	0.1%	20.8%	0.3%	1.3%	7.3%	1.4%	1.2%	0.0%	1.4%	0.0%	0.1%	15.2%	22.1%	0.0%	9.3%	0.2%	18.4%
1985	1421	2,3,4,5	0.8%	0.0%	0.0%	0.0%	0.2%	18.6%	0.8%	0.4%	5.9%	0.3%	2.0%	0.0%	1.9%	0.0%	0.0%	17.6%	18.2%	0.0%	11.7%	0.0%	21.6%
1986	480	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	19.0%	0.0%	0.0%	7.5%	0.0%	2.9%	0.0%	4.0%	0.0%	1.3%	9.8%	21.0%	0.0%	0.8%	0.0%	33.8%
1987	435	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	12.6%	0.0%	0.0%	12.6%	0.0%	3.9%	0.0%	7.1%	0.5%	0.2%	13.8%	10.6%	0.0%	0.0%	0.0%	38.6%
1988	1706	2,3,4,5	0.1%	0.0%	0.0%	0.2%	0.5%	5.5%	4.2%	0.2%	7.3%	0.5%	4.6%	0.0%	7.1%	0.0%	0.6%	25.2%	14.1%	0.0%	1.2%	0.0%	28.7%
1989	5015	2,3,4,5	0.1%	0.0%	0.0%	0.2%	0.0%	7.4%	2.5%	0.2%	4.3%	0.3%	4.0%	0.0%	11.0%	0.0%	0.4%	15.3%	15.7%	0.0%	6.1%	0.0%	32.3%
1990	5453	2,3,4,5	0.0%	0.0%	0.1%	0.3%	0.0%	22.7%	4.3%	0.3%	3.4%	0.3%	1.2%	0.0%	9.0%	0.0%	0.4%	14.0%	11.6%	0.0%	9.7%	0.4%	22.4%
1991	1747	2,3,4,5	0.4%	0.0%	0.0%	0.0%	0.0%	15.2%	2.7%	0.1%	1.7%	0.1%	1.0%	0.0%	11.6%	0.0%	0.3%	11.8%	12.6%	0.0%	14.7%	0.2%	27.4%
1992	1332	2,3,4,5	0.6%	0.1%	0.0%	0.0%	0.0%	17.3%	2.2%	0.3%	3.4%	0.9%	3.1%	0.0%	9.2%	0.0%	0.7%	14.2%	17.4%	0.0%	9.6%	0.0%	21.2%
1993	1404	2,3,4,5	0.2%	0.1%	0.0%	0.0%	0.0%	15.6%	4.6%	0.7%	3.1%	0.1%	2.8%	0.0%	5.5%	0.0%	0.2%	8.3%	20.8%	0.0%	7.5%	0.0%	30.4%
1994	1591	2,3,4,5	0.0%	0.0%	0.0%	0.5%	0.0%	9.1%	1.3%	0.0%	3.0%	0.0%	4.3%	0.0%	0.7%	0.0%	0.0%	11.3%	9.5%	0.0%	5.0%	0.3%	55.1%
1995	3515	2,3,4,5	0.2%	0.0%	0.0%	0.1%	0.0%	3.7%	1.1%	0.0%	1.8%	0.0%	1.0%	0.0%	1.3%	0.0%	0.0%	4.6%	11.7%	0.0%	1.0%	0.0%	73.4%
1996	4825	2,3,4,5	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	1.7%	0.0%	4.1%	0.0%	0.4%	0.0%	2.9%	0.0%	0.0%	3.8%	14.9%	0.0%	2.6%	0.0%	69.5%
1997	2545	2,3,4,5	0.5%	0.0%	0.0%	0.3%	0.0%	5.5%	1.5%	0.0%	1.8%	0.0%	0.5%	0.0%	1.6%	0.0%	0.1%	2.2%	12.9%	0.0%	0.7%	0.2%	72.3%
1998	1754	2,3,4,5	1.3%	0.0%	0.0%	0.9%	0.1%	0.5%	1.4%	0.0%	1.7%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	4.2%	5.8%	0.0%	3.8%	0.5%	79.0%
1999	2153	2,3,4,5	0.5%	0.0%	0.0%	0.2%	0.0%	0.7%	4.0%	0.0%	2.5%	0.0%	0.0%	0.0%	3.0%	0.0%	0.3%	4.5%	4.8%	0.0%	4.7%	0.0%	74.7%
2000	2219	2,3,4,5	0.4%	0.0%	0.0%	0.0%	0.0%	10.0%	4.3%	0.0%	1.8%	0.0%	0.0%	0.0%	0.3%	0.0%	0.3%	6.2%	6.3%	0.0%	5.8%	0.0%	64.6%
2001	3726	2,3,4,5	0.1%	0.0%	0.0%	0.0%	0.1%	8.1%	3.2%	0.0%	3.0%	0.0%	0.0%	0.0%	4.2%	0.0%	0.4%	4.2%	8.7%	0.0%	7.2%	0.0%	60.8%
2002	3425	2,3,4,5	0.7%	0.0%	0.0%	0.7%	0.1%	12.7%	3.1%	0.0%	4.4%	0.0%	0.1%	0.0%	4.0%	0.0%	0.5%	3.6%	6.3%	0.0%	14.4%	0.0%	49.5%
2003	2166	2,3,4,5	0.6%	0.0%	0.0%	0.8%	0.0%	14.2%	3.6%	0.0%	3.8%	0.0%	0.0%	0.0%	4.9%	0.0%	0.4%	7.0%	9.5%	0.0%	7.5%	0.0%	47.6%
2004	1934	2,3,4,5	0.4%	0.1%	0.0%	0.6%	0.3%	17.7%	4.2%	0.0%	2.7%	0.0%	0.0%	0.0%	9.6%	0.0%	1.4%	8.0%	9.2%	0.0%	6.6%	0.0%	39.2%
2005	2115	2,3,4,5	0.0%	0.0%	0.0%	0.4%	0.5%	13.4%	4.5%	0.0%	3.8%	0.0%	0.0%	0.0%	5.6%	0.0%	1.2%	4.1%	6.3%	0.0%	1.8%	0.0%	58.4%
2006	3274	2,3,4,5	0.3%	0.0%	0.1%	0.5%	0.4%	12.3%	2.6%	0.0%	2.1%	0.0%	0.0%	0.0%	6.4%	0.0%	0.5%	6.3%	6.4%	0.0%	7.7%	0.0%	54.4%
2007	3274	2,3,4,5	0.2%	0.0%	0.0%	0.2%	0.0%	12.0%	4.3%	0.0%	1.4%	0.0%	0.0%	0.0%	5.3%	0.0%	0.2%	3.1%	10.5%	0.0%	12.3%	0.2%	50.4%
2008	2387	2,3,4,5	0.0%	0.0%	0.0%	0.3%	0.0%	7.3%	3.5%	0.0%	2.2%	0.0%	0.0%	0.0%	2.8%	0.0%	0.4%	4.0%	10.6%	0.0%	12.9%	0.3%	55.6%
2009	2657	2,3,4,5	0.1%	0.0%	0.0%	0.2%	0.0%	5.0%	8.4%	0.0%	3.6%	0.0%	0.0%	0.0%	2.6%	0.0%	0.3%	2.5%	8.4%	0.0%	12.5%	0.2%	55.9%
2010	2815	2,3,4,5	0.1%	0.0%	0.0%	0.1%	0.6%	5.5%	4.9%	0.0%	1.7%	0.0%	0.0%	0.0%	2.5%	0.0%	1.3%	1.1%	10.4%	0.0%	1.0%	0.0%	70.6%
1979-2010	2608		0.3%	0.0%	0.0%	0.3%	0.1%	11.5%	2.7%	0.2%	4.1%	0.2%	1.3%	0.0%	4.5%	0.0%	0.4%	9.1%	12.6%	0.0%	6.6%	0.1%	45.9%
1979-1984	3423		0.2%	0.1%	0.0%	0.5%	0.1%	20.5%	0.2%	1.3%	7.6%	1.3%	2.1%	0.0%	2.0%	0.0%	0.1%	17.9%	23.8%	0.0%	7.7%	0.1%	14.5%
1985-1995	2191		0.2%	0.0%	0.0%	0.1%	0.1%	13.3%	2.2%	0.2%	4.9%	0.2%	2.8%	0.0%	6.2%	0.0%	0.4%	13.3%	14.8%	0.0%	6.1%	0.1%	35.0%
1996-1998	3041		0.6%	0.0%	0.0%	0.4%	0.0%	2.0%	1.5%	0.0%	2.5%	0.0%	0.3%	0.0%	1.8%	0.0%	0.0%	3.4%	11.2%	0.0%	2.4%	0.2%	73.6%
1999-2010	2679		0.3%	0.0%	0.0%	0.3%	0.2%	9.9%	4.2%	0.0%	2.7%	0.0%	0.0%	0.0%	4.3%	0.0%	0.6%	4.6%	8.1%	0.0%	7.9%	0.1%	56.8%

Appendix C.72. Percent distribution of South Puget Sound Fall Fingerling (Puget Sound Hatchery Fingerling) total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	1027	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	621	2,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	1275	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	3230	2,3,4	0.2%	0.1%	0.0%	0.2%	0.1%	22.5%	0.1%	2.1%	10.6%	0.9%	1.8%	0.0%	2.8%	0.0%	0.1%	17.3%	24.6%	0.0%	7.1%	0.0%	9.4%
1983	5001	2,3,4,5	0.1%	0.0%	0.0%	0.7%	0.1%	17.4%	0.2%	0.2%	3.7%	1.7%	2.7%	0.0%	1.6%	0.0%	0.0%	19.4%	34.4%	0.0%	6.6%	0.2%	10.9%
1984	3985	2,3,4,5	0.1%	0.2%	0.0%	0.7%	0.1%	21.1%	0.3%	1.3%	7.1%	1.4%	1.1%	0.0%	1.5%	0.0%	0.1%	14.7%	24.3%	0.0%	9.1%	0.2%	16.8%
1985	1519	2,3,4,5	0.8%	0.0%	0.0%	0.0%	0.2%	18.4%	0.9%	0.3%	5.9%	0.3%	1.9%	0.0%	1.9%	0.0%	0.0%	17.4%	20.7%	0.0%	11.2%	0.0%	20.2%
1986	554	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	19.0%	0.0%	0.0%	7.4%	0.0%	2.9%	0.0%	4.0%	0.0%	1.3%	9.0%	26.5%	0.0%	0.7%	0.0%	29.2%
1987	591	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%	0.0%	12.0%	0.0%	3.4%	0.0%	8.8%	0.8%	0.2%	11.2%	15.2%	0.0%	0.0%	0.0%	28.4%
1988	2781	2,3,4,5	0.3%	0.0%	0.0%	0.2%	0.4%	8.5%	3.1%	0.1%	17.3%	0.8%	3.2%	0.0%	7.0%	0.0%	0.5%	19.4%	20.6%	0.0%	1.0%	0.0%	17.6%
1989	5624	2,3,4,5	0.1%	0.0%	0.0%	0.3%	0.0%	8.8%	2.4%	0.2%	5.2%	0.4%	3.7%	0.0%	12.2%	0.0%	0.4%	14.6%	17.1%	0.0%	5.8%	0.0%	28.8%
1990	5949	2,3,4,5	0.0%	0.1%	0.1%	0.3%	0.0%	23.8%	4.3%	0.3%	3.7%	0.3%	1.2%	0.0%	9.2%	0.0%	0.4%	13.3%	13.0%	0.0%	9.2%	0.5%	20.5%
1991	1907	2,3,4,5	0.5%	0.0%	0.0%	0.0%	0.0%	16.5%	2.7%	0.2%	1.8%	0.1%	0.9%	0.0%	12.3%	0.0%	0.4%	11.3%	14.0%	0.0%	14.0%	0.3%	25.1%
1992	1627	2,3,4,5	0.6%	0.4%	0.0%	0.0%	0.0%	17.2%	2.0%	0.3%	4.4%	0.9%	2.8%	0.0%	8.9%	0.0%	0.6%	12.7%	23.3%	0.0%	8.6%	0.0%	17.3%
1993	1621	2,3,4,5	0.3%	0.1%	0.0%	0.0%	0.0%	18.0%	4.4%	0.9%	3.8%	0.1%	2.6%	0.0%	5.9%	0.0%	0.2%	7.8%	22.7%	0.0%	7.0%	0.0%	26.3%
1994	1906	2,3,4,5	0.0%	0.0%	0.0%	0.5%	0.0%	9.4%	1.3%	0.0%	4.9%	0.0%	4.9%	0.0%	0.6%	0.0%	0.0%	10.9%	16.4%	0.0%	4.9%	0.3%	46.0%
1995	3959	2,3,4,5	0.2%	0.1%	0.0%	0.1%	0.0%	4.9%	1.2%	0.0%	2.8%	0.0%	1.7%	0.0%	1.3%	0.0%	0.0%	4.8%	16.7%	0.0%	1.0%	0.0%	65.2%
1996	5193	2,3,4,5	0.2%	0.0%	0.0%	0.0%	0.1%	0.9%	1.8%	0.0%	5.1%	0.0%	0.5%	0.0%	2.8%	0.0%	0.0%	3.7%	17.8%	0.0%	2.6%	0.0%	64.6%
1997	2706	2,3,4,5	0.5%	0.0%	0.0%	0.3%	0.0%	6.5%	1.6%	0.0%	2.0%	0.0%	0.8%	0.0%	1.6%	0.0%	0.1%	2.1%	15.6%	0.0%	0.7%	0.2%	68.0%
1998	1892	2,3,4,5	1.4%	0.0%	0.0%	0.9%	0.1%	0.5%	1.5%	0.0%	2.4%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	4.3%	10.1%	0.0%	4.0%	0.5%	73.3%
1999	2276	2,3,4,5	0.6%	0.0%	0.0%	0.3%	0.0%	0.7%	4.3%	0.0%	3.5%	0.0%	0.0%	0.0%	3.5%	0.0%	0.3%	4.5%	6.8%	0.0%	4.8%	0.0%	70.7%
2000	2509	2,3,4,5	0.4%	0.1%	0.0%	0.0%	0.0%	9.9%	4.8%	0.0%	2.9%	0.0%	0.0%	0.0%	0.3%	0.0%	0.2%	6.4%	11.8%	0.0%	6.0%	0.0%	57.1%
2001	4071	2,3,4,5	0.1%	0.0%	0.0%	0.0%	0.1%	7.9%	3.5%	0.0%	4.0%	0.0%	0.0%	0.0%	4.7%	0.0%	0.4%	4.2%	12.3%	0.0%	7.1%	0.0%	55.6%
2002	3681	2,3,4,5	0.9%	0.0%	0.0%	0.8%	0.2%	12.6%	3.5%	0.0%	5.2%	0.0%	0.2%	0.0%	4.3%	0.0%	0.5%	3.5%	8.3%	0.0%	14.0%	0.0%	46.1%
2003	2345	2,3,4,5	0.7%	0.0%	0.0%	0.9%	0.0%	13.8%	4.5%	0.0%	4.5%	0.0%	0.0%	0.0%	5.3%	0.0%	0.4%	6.7%	12.1%	0.0%	7.2%	0.0%	44.0%
2004	2204	2,3,4,5	0.4%	0.1%	0.0%	0.6%	0.5%	17.1%	4.6%	0.0%	3.6%	0.0%	0.0%	0.0%	10.1%	0.0%	1.4%	7.6%	13.2%	0.0%	6.3%	0.0%	34.4%
2005	2339	2,3,4,5	0.0%	0.0%	0.0%	0.4%	0.7%	13.2%	5.0%	0.0%	5.3%	0.0%	0.0%	0.0%	6.2%	0.0%	1.2%	4.1%	9.2%	0.0%	1.8%	0.0%	52.8%
2006	3576	2,3,4,5	0.3%	0.0%	0.1%	0.5%	0.5%	12.1%	2.9%	0.0%	2.8%	0.0%	0.0%	0.0%	7.0%	0.0%	0.5%	6.5%	8.9%	0.0%	7.9%	0.0%	49.8%
2007	3664	2,3,4,5	0.2%	0.0%	0.0%	0.2%	0.0%	11.7%	4.5%	0.0%	1.9%	0.0%	0.0%	0.0%	5.8%	0.0%	0.2%	3.1%	14.9%	0.0%	12.3%	0.2%	45.0%
2008	2615	2,3,4,5	0.0%	0.0%	0.0%	0.3%	0.0%	7.2%	3.9%	0.0%	3.0%	0.0%	0.0%	0.0%	3.2%	0.0%	0.4%	4.1%	13.8%	0.0%	13.0%	0.3%	50.8%
2009	2998	2,3,4,5	0.1%	0.0%	0.0%	0.2%	0.0%	5.0%	9.2%	0.0%	5.0%	0.0%	0.0%	0.0%	2.8%	0.0%	0.3%	2.5%	12.3%	0.0%	12.6%	0.2%	49.6%
2010	2985	2,3,4,5	0.1%	0.0%	0.0%	0.1%	0.8%	5.4%	5.9%	0.0%	2.1%	0.0%	0.0%	0.0%	2.8%	0.0%	1.4%	1.1%	12.5%	0.0%	1.0%	0.0%	66.6%
1979-2010	2942		0.3%	0.0%	0.0%	0.3%	0.1%	12.1%	2.9%	0.2%	5.0%	0.2%	1.3%	0.0%	4.8%	0.0%	0.4%	8.6%	16.2%	0.0%	6.5%	0.1%	41.0%
1979-1984	4072		0.2%	0.1%	0.0%	0.5%	0.1%	20.3%	0.2%	1.2%	7.1%	1.4%	1.9%	0.0%	1.9%	0.0%	0.1%	17.1%	27.8%	0.0%	7.6%	0.1%	12.4%
1985-1995	2549		0.3%	0.1%	0.0%	0.1%	0.1%	14.9%	2.0%	0.2%	6.3%	0.3%	2.7%	0.0%	6.5%	0.1%	0.4%	12.0%	18.8%	0.0%	5.8%	0.1%	29.5%
1996-1998	3264		0.7%	0.0%	0.0%	0.4%	0.1%	2.6%	1.6%	0.0%	3.2%	0.0%	0.4%	0.0%	1.8%	0.0%	0.0%	3.4%	14.5%	0.0%	2.4%	0.2%	68.6%
1999-2010	2939		0.3%	0.0%	0.0%	0.4%	0.2%	9.7%	4.7%	0.0%	3.7%	0.0%	0.0%	0.0%	4.7%	0.0%	0.6%	4.5%	11.4%	0.0%	7.8%	0.1%	51.9%

Appendix C.73. Percent distribution of South Puget Sound Fall Yearling (Puget Sound Hatchery Yearling) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	2	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	118	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	283	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	0.0%	3.2%	2.5%	0.0%	0.0%	1.1%	0.0%	0.0%	12.0%	66.1%	0.0%	2.5%	1.4%	8.5%
1983	395	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	5.8%	0.0%	0.0%	0.5%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	9.9%	76.2%	0.0%	0.0%	0.0%	5.8%
1984	247	3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	7.3%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	32.8%	43.3%	0.0%	0.8%	0.0%	14.2%
1985	65	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	30	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	448	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	1270	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.2%	0.6%	0.0%	1.4%	0.0%	0.1%	33.1%	52.4%	0.0%	0.3%	0.6%	11.0%
1991	1036	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	5.6%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	3.7%	0.0%	0.0%	12.6%	57.2%	0.0%	0.2%	0.4%	19.6%
1992	500	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.6%	1.2%	0.0%	0.8%	0.0%	0.0%	0.0%	4.6%	0.0%	0.8%	27.4%	48.4%	0.0%	1.0%	0.0%	11.2%
1993	265	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	0.0%	0.0%	1.1%	0.0%	0.0%	0.0%	1.5%	0.0%	0.0%	10.9%	52.5%	0.0%	0.0%	3.0%	29.4%
1994	729	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.7%	0.0%	0.5%	0.0%	2.3%	0.0%	0.0%	0.0%	0.0%	16.5%	61.3%	0.0%	0.0%	0.0%	17.8%
1995	548	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	6.4%	2.0%	0.0%	2.6%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	10.0%	66.8%	0.0%	0.4%	1.5%	10.0%
1996	691	2,3,4,5	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	0.0%	1.7%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	2.9%	88.7%	0.0%	0.3%	0.6%	3.3%
1997	476	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	0.4%	0.0%	1.1%	0.0%	0.0%	0.0%	1.3%	0.0%	2.3%	4.0%	64.3%	0.0%	0.0%	0.0%	25.2%
1998	90	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	0.0%	0.0%	2.2%	82.2%	0.0%	3.3%	0.0%	10.0%
1999	35	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.1%	0.0%	0.0%	0.0%	8.6%	0.0%	0.0%	2.9%	65.7%	0.0%	0.0%	0.0%	5.7%
2000	76	3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%	0.0%	6.6%	0.0%	0.0%	11.8%	69.7%	0.0%	0.0%	0.0%	6.6%
2001	67	2,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	74.6%	0.0%	0.0%	0.0%	17.9%
2002	8	2,3,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	6	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	126	2,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%	97.6%
2005	255	2,3,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	1.2%	16.1%	53.7%	0.0%	3.1%	0.0%	23.9%
2006	270	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	8.5%	4.1%	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	0.0%	0.0%	21.1%	30.4%	0.0%	3.0%	0.0%	30.4%
2007	243	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	2.1%	16.5%	41.6%	0.0%	2.9%	0.0%	30.0%
2008	78	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%	0.0%	0.0%	6.4%	28.2%	0.0%	12.8%	0.0%	46.2%
2009	121	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	19.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	2.5%	4.1%	38.8%	0.0%	1.7%	5.0%	27.3%
2010	146	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	3.4%	0.0%	0.0%	0.0%	0.7%	0.0%	2.1%	6.2%	21.9%	0.0%	0.0%	0.0%	64.4%
1979-2010	361		0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	1.7%	0.0%	1.6%	0.2%	0.1%	0.0%	2.1%	0.0%	0.5%	11.8%	53.9%	0.0%	1.5%	0.6%	23.5%
1979-1984	308		0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	0.0%	0.0%	1.8%	1.4%	0.0%	0.0%	0.4%	0.0%	0.0%	18.2%	61.9%	0.0%	1.1%	0.5%	9.5%
1985-1995	725		0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	0.6%	0.0%	1.0%	0.0%	0.5%	0.0%	1.9%	0.0%	0.1%	18.4%	56.4%	0.0%	0.3%	0.9%	16.5%
1996-1998	419		0.1%	0.0%	0.0%	0.0%	0.0%	0.5%	0.6%	0.0%	0.9%	0.0%	0.0%	0.0%	1.4%	0.0%	0.8%	3.0%	78.4%	0.0%	1.2%	0.2%	12.8%
1999-2010	142		0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	3.2%	0.0%	2.1%	0.0%	0.0%	0.0%	2.9%	0.0%	0.8%	8.5%	42.7%	0.0%	2.3%	0.5%	35.0%

Appendix C.74. Percent distribution of South Puget Sound Fall Yearling (Puget Sound Hatchery Yearling) total fishing mortalities among fisheries and escapement.

	Estimated		AABM							ISBM													
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	18	2	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	177	2,3	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	373	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%	0.0%	0.0%	2.7%	2.1%	0.0%	0.0%	0.8%	0.0%	0.0%	10.7%	70.5%	0.0%	1.9%	1.3%	6.4%
1983	491	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	5.5%	0.0%	0.0%	0.4%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	8.8%	78.8%	0.0%	0.0%	0.0%	4.7%
1984	271	3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	0.0%	0.0%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	31.0%	46.5%	0.0%	0.7%	0.0%	12.9%
1985	70	4,5	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	146	2	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	744	2,3	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	1432	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.1%	0.1%	0.5%	0.0%	1.6%	0.0%	0.1%	31.1%	55.0%	0.0%	0.3%	0.6%	9.8%
1991	1234	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	5.4%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	3.5%	0.0%	0.0%	11.3%	62.2%	0.0%	0.2%	0.4%	16.5%
1992	588	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.9%	1.2%	0.0%	0.9%	0.0%	0.0%	0.0%	4.8%	0.0%	0.7%	25.9%	51.2%	0.0%	1.0%	0.0%	9.5%
1993	507	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	1.8%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	6.9%	71.6%	0.0%	0.0%	2.0%	15.4%
1994	886	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.7%	0.0%	0.9%	0.0%	2.4%	0.0%	0.0%	0.0%	0.0%	15.1%	65.2%	0.0%	0.0%	0.0%	14.7%
1995	777	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	5.7%	1.7%	0.0%	2.6%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	8.1%	73.0%	0.0%	0.3%	1.4%	7.1%
1996	812	2,3,4,5	0.5%	0.0%	0.0%	0.0%	0.0%	0.1%	1.1%	0.0%	1.8%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	2.6%	89.5%	0.0%	0.2%	0.6%	2.8%
1997	564	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.4%	0.0%	1.1%	0.0%	0.0%	0.0%	1.1%	0.0%	2.1%	3.5%	69.1%	0.0%	0.0%	0.0%	21.3%
1998	109	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%	1.8%	85.3%	0.0%	2.8%	0.0%	8.3%
1999	85	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.3%	0.0%	0.0%	0.0%	4.7%	0.0%	0.0%	1.2%	76.5%	0.0%	0.0%	0.0%	2.4%
2000	92	3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.4%	0.0%	0.0%	0.0%	0.0%	0.0%	6.5%	0.0%	0.0%	9.8%	72.8%	0.0%	0.0%	0.0%	5.4%
2001	83	2,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	3.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%	79.5%	0.0%	0.0%	0.0%	14.5%
2002	10	2,3,5	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	7	3,4	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	238	2,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	12.6%	31.9%	0.0%	2.1%	0.0%	51.7%
2005	306	2,3,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	1.3%	14.7%	58.8%	0.0%	2.9%	0.0%	19.9%
2006	379	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	6.1%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%	18.5%	46.4%	0.0%	2.1%	0.0%	21.6%
2007	330	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	0.0%	1.5%	17.6%	50.3%	0.0%	2.7%	0.0%	22.1%
2008	125	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	0.0%	0.0%	7.2%	43.2%	0.0%	15.2%	0.0%	28.8%
2009	169	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	1.8%	4.7%	47.3%	0.0%	1.8%	6.5%	19.5%
2010	194	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	0.0%	5.2%	0.0%	0.0%	0.0%	0.5%	0.0%	1.5%	7.2%	35.6%	0.0%	0.0%	0.0%	48.5%
1979-2010	457		0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	1.6%	0.0%	1.6%	0.2%	0.1%	0.0%	1.7%	0.0%	0.4%	11.4%	61.8%	0.0%	1.6%	0.6%	16.5%
1979-1984	378		0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	0.0%	0.0%	1.6%	1.3%	0.0%	0.0%	0.3%	0.0%	0.0%	16.8%	65.3%	0.0%	0.9%	0.4%	8.0%
1985-1995	904		0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	0.6%	0.0%	1.1%	0.0%	0.5%	0.0%	1.9%	0.0%	0.1%	16.4%	63.0%	0.0%	0.3%	0.7%	12.1%
1996-1998	495		0.2%	0.0%	0.0%	0.0%	0.0%	0.5%	0.5%	0.0%	1.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.7%	2.7%	81.3%	0.0%	1.0%	0.2%	10.8%
1999-2010	200		0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	3.0%	0.0%	2.0%	0.0%	0.0%	0.0%	2.3%	0.0%	0.6%	9.3%	54.2%	0.0%	2.7%	0.7%	23.4%

Appendix C.75. Percent distribution of Squaxin Pens Fall Yearling (Puget Sound Hatchery Yearling) reported catch among fisheries and escapement.

	Estimated		AABM							ISBM													
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	54	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	580	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	1423	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	3.4%	0.6%	0.0%	0.7%	0.0%	1.3%	0.0%	4.1%	0.0%	0.4%	33.1%	53.1%	0.0%	0.6%	0.0%	2.5%
1991	788	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.6%	0.0%	0.5%	1.1%	0.0%	0.5%	0.0%	8.8%	0.0%	0.4%	35.3%	45.2%	0.0%	0.0%	0.0%	3.7%
1992	576	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.2%	1.6%	0.5%	0.5%	2.1%	0.0%	2.1%	0.0%	5.2%	0.0%	0.3%	26.9%	53.6%	0.0%	1.4%	0.0%	5.6%
1993	286	3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	8.4%	2.8%	0.0%	6.6%	0.0%	2.8%	0.0%	11.5%	0.0%	0.7%	2.8%	46.5%	0.0%	1.4%	0.0%	16.4%
1994	162	2,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	27.2%	4.9%	0.0%	6.2%	0.0%	3.7%	0.0%	6.8%	0.0%	0.0%	23.5%	4.9%	0.0%	0.0%	0.0%	22.8%
1995	45	2,3,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	62.2%	8.9%	0.0%	0.0%	0.0%	28.9%
1996	337	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	4.7%	89.9%	0.0%	0.3%	0.0%	2.7%
1997	171	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	0.0%	0.0%	8.2%	86.0%	0.0%	0.0%	0.0%	0.6%
1998	104	3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	0.0%	0.0%	1.9%	91.3%	0.0%	1.0%	0.0%	2.9%
1999	16	2,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	62.5%	0.0%	0.0%	0.0%	25.0%
2000	272	3,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	180	4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1979-2010	391		0.0%	0.0%	0.0%	0.0%	0.0%	6.0%	0.9%	0.1%	1.9%	0.0%	1.0%	0.0%	4.3%	0.0%	0.2%	19.9%	54.2%	0.0%	0.5%	0.0%	11.1%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	547		0.0%	0.0%	0.0%	0.0%	0.0%	7.5%	1.5%	0.2%	2.8%	0.0%	1.7%	0.0%	6.1%	0.0%	0.3%	30.6%	35.4%	0.0%	0.6%	0.0%	13.3%
1996-1998	204		0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	2.0%	0.0%	0.0%	5.0%	89.1%	0.0%	0.4%	0.0%	2.0%
1999-2010	16		0.0%	0.0%	0.0%	0.0%	0.0%	12.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	62.5%	0.0%	0.0%	0.0%	25.0%

Appendix C.76. Percent distribution of Squaxin Pens Fall Yearling (Puget Sound Hatchery Yearling) total fishing mortalities among fisheries and escapement.

	Estimated		AABM							ISBM													
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	196	2	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	1008	2,3	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	1725	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%	0.6%	0.1%	0.9%	0.0%	1.1%	0.0%	4.1%	0.0%	0.4%	32.3%	54.6%	0.0%	0.5%	0.0%	2.1%
1991	922	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.6%	0.0%	0.5%	1.2%	0.0%	0.4%	0.0%	8.6%	0.0%	0.3%	33.2%	48.0%	0.0%	0.0%	0.0%	3.1%
1992	811	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.1%	1.4%	0.5%	0.4%	2.5%	0.0%	1.5%	0.0%	4.3%	0.0%	0.2%	25.3%	58.4%	0.0%	1.5%	0.0%	3.9%
1993	328	3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	9.8%	2.4%	0.0%	7.6%	0.0%	2.4%	0.0%	11.3%	0.0%	0.6%	3.0%	47.3%	0.0%	1.2%	0.0%	14.3%
1994	173	2,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	26.6%	5.2%	0.0%	6.4%	0.0%	4.6%	0.0%	6.4%	0.0%	0.0%	22.5%	6.9%	0.0%	0.0%	0.0%	21.4%
1995	206	2,3,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	24.8%	66.5%	0.0%	0.5%	0.0%	6.3%
1996	417	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	2.2%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	5.3%	89.7%	0.0%	0.2%	0.0%	2.2%
1997	219	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	0.0%	0.0%	6.8%	88.1%	0.0%	0.0%	0.0%	0.5%
1998	126	3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	1.6%	92.9%	0.0%	0.8%	0.0%	2.4%
1999	128	2,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.8%	90.6%	0.0%	0.0%	0.0%	3.1%
2000	339	3,5	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	209	4	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1979-2010	506		0.0%	0.0%	0.0%	0.0%	0.0%	5.2%	0.9%	0.1%	2.4%	0.0%	1.0%	0.0%	4.0%	0.0%	0.2%	15.6%	64.3%	0.0%	0.5%	0.0%	5.9%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	694		0.0%	0.0%	0.0%	0.0%	0.0%	7.7%	1.5%	0.2%	3.3%	0.0%	1.7%	0.0%	5.8%	0.0%	0.3%	23.5%	47.0%	0.0%	0.6%	0.0%	8.5%
1996-1998	254		0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	4.6%	90.2%	0.0%	0.3%	0.0%	1.7%
1999-2010	128		0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.8%	90.6%	0.0%	0.0%	0.0%	3.1%

Appendix C.77. Percent distribution of Salmon River (Oregon Coast) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	479	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	844	2,3,4	31.2%	0.0%	0.8%	9.6%	0.0%	8.2%	0.0%	0.0%	0.0%	1.2%	1.5%	0.0%	1.1%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	14.6%	31.6%
1981	772	2,3,4,5	21.5%	0.0%	0.5%	25.3%	0.0%	3.4%	0.6%	0.0%	0.0%	0.3%	2.6%	0.0%	0.8%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	15.5%	28.6%
1982	717	2,3,4,5,6	7.8%	1.4%	0.8%	12.4%	0.0%	6.4%	0.0%	0.0%	0.0%	1.0%	0.6%	0.0%	1.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	23.8%	43.8%
1983	641	3,4,5,6	15.4%	0.6%	0.0%	15.1%	0.0%	8.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	21.1%	38.7%
1984	764	2,4,5,6	10.6%	0.0%	0.0%	17.8%	0.0%	3.4%	0.0%	0.0%	0.0%	3.5%	1.2%	0.0%	0.3%	0.0%	0.3%	0.0%	0.0%	0.0%	0.3%	20.5%	42.1%
1985	600	2,3,5,6	13.2%	2.2%	0.0%	17.3%	0.0%	1.7%	0.0%	0.0%	0.0%	1.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	21.2%	43.0%
1986	541	2,3,4,6	14.4%	0.0%	0.0%	12.8%	0.0%	2.0%	0.0%	0.0%	0.0%	4.4%	0.6%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	16.8%	48.4%
1987	728	2,3,4,5	10.3%	0.0%	0.0%	15.1%	0.0%	2.3%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	2.6%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	23.8%	44.4%
1988	1218	2,3,4,5,6	9.3%	0.3%	0.0%	6.2%	0.0%	3.8%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.8%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	14.2%	63.4%
1989	1142	2,3,4,5,6	8.4%	0.0%	0.0%	11.4%	0.0%	3.9%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	3.4%	0.0%	0.4%	0.0%	0.3%	0.0%	0.0%	24.0%	46.8%
1990	1478	2,3,4,5,6	11.9%	0.7%	0.0%	10.6%	1.6%	7.8%	0.0%	0.0%	0.0%	0.3%	0.9%	0.0%	3.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	23.5%	38.0%
1991	2442	2,3,4,5,6	18.4%	0.0%	0.5%	15.2%	0.8%	5.8%	0.0%	0.0%	0.0%	0.1%	0.7%	0.0%	0.2%	0.0%	0.2%	0.0%	0.2%	0.0%	0.0%	24.5%	33.4%
1992	2804	2,3,4,5,6	2.6%	0.6%	0.0%	6.6%	1.8%	14.8%	0.0%	0.0%	0.0%	0.8%	0.4%	0.0%	1.8%	0.0%	0.5%	0.0%	0.2%	0.0%	0.0%	15.3%	54.5%
1993	2551	2,3,4,5,6	6.8%	0.2%	0.2%	13.5%	1.0%	16.1%	0.0%	0.0%	0.0%	0.2%	0.5%	0.0%	2.9%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	31.4%	27.2%
1994	4075	2,3,4,5,6	8.8%	0.2%	1.0%	14.8%	1.9%	4.7%	0.0%	0.0%	0.0%	0.2%	0.1%	0.0%	1.5%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	17.3%	49.1%
1995	3895	2,3,4,5,6	6.6%	0.1%	0.3%	4.5%	0.9%	0.8%	0.2%	0.0%	0.0%	0.1%	0.1%	0.0%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	29.8%	56.3%
1996	1930	2,3,4,5,6	11.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.7%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	51.7%	31.5%
1997	3971	2,3,4,5,6	27.7%	0.0%	1.6%	3.3%	0.4%	0.2%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	1.4%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	19.0%	46.1%
1998	2881	2,3,4,5,6	10.3%	0.5%	0.4%	11.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	1.0%	0.0%	0.0%	0.0%	0.1%	30.8%	44.2%
1999	2047	2,3,4,5,6	12.0%	0.1%	0.0%	4.4%	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	33.7%	44.0%
2000	2647	2,3,4,5,6	12.7%	0.0%	0.5%	2.9%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	19.6%	61.4%
2001	3591	2,3,4,5,6	12.3%	0.0%	0.7%	3.3%	1.3%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	0.0%	1.5%	0.0%	0.0%	0.0%	0.1%	25.2%	52.5%
2002	4745	2,3,4,5,6	17.6%	0.0%	0.9%	7.1%	2.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	32.8%	36.1%
2003	4662	2,3,4,5,6	12.9%	1.0%	0.6%	5.9%	1.6%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	2.8%	0.0%	0.0%	0.0%	0.0%	32.3%	41.2%
2004	4963	2,3,4,5,6	18.1%	0.9%	0.8%	7.3%	3.6%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	22.8%	42.7%
2005	4539	2,3,4,5,6	19.7%	0.0%	1.2%	8.5%	4.8%	2.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	0.1%	1.3%	0.0%	0.0%	0.0%	0.0%	30.3%	30.0%
2006	1857	2,3,4,5,6	24.3%	0.1%	1.7%	12.3%	5.3%	2.0%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	3.0%	0.0%	0.0%	0.0%	0.2%	27.0%	20.9%
2007	1436	2,3,4,5,6	11.6%	0.0%	0.8%	5.8%	4.0%	0.1%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	35.9%	40.2%
2008	1753	2,3,4,5,6	12.8%	0.0%	1.4%	6.7%	4.9%	0.8%	1.2%	0.0%	0.0%	0.0%	0.2%	0.0%	1.0%	0.0%	0.8%	0.1%	0.0%	0.0%	0.0%	13.7%	56.5%
2009	2307	2,3,4,5,6	16.1%	0.9%	1.4%	12.5%	3.3%	0.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	25.2%	38.8%
2010	3784	2,3,4,5,6	10.5%	0.0%	1.2%	6.7%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.7%	0.1%	0.0%	0.0%	0.0%	43.5%	35.3%
1979-2010	2333		13.8%	0.3%	0.6%	9.9%	1.5%	3.3%	0.2%	0.0%	0.0%	0.5%	0.4%	0.0%	1.2%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	25.2%	42.3%
1979-1984	748		17.3%	0.4%	0.4%	16.0%	0.0%	5.9%	0.1%	0.0%	0.0%	1.3%	1.2%	0.0%	0.6%	0.0%	0.6%	0.0%	0.0%	0.0%	0.1%	19.1%	37.0%
1985-1995	1952		10.1%	0.4%	0.2%	11.7%	0.7%	5.8%	0.0%	0.0%	0.0%	0.7%	0.4%	0.0%	1.5%	0.0%	0.6%	0.0%	0.1%	0.0%	0.0%	22.0%	45.9%
1996-1998	2927		16.4%	0.2%	0.7%	4.8%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	33.8%	40.6%
1999-2010	3194		15.0%	0.2%	0.9%	6.9%	3.2%	0.7%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	28.5%	41.6%

Appendix C.78. Percent distribution of Salmon River (Oregon Coast) total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	573	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	911	2,3,4	31.5%	0.1%	0.9%	11.6%	0.0%	8.5%	0.0%	0.0%	0.0%	1.1%	1.5%	0.0%	1.2%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	13.9%	29.3%
1981	847	2,3,4,5	23.0%	0.0%	0.5%	26.3%	0.0%	3.9%	0.6%	0.0%	0.0%	0.6%	2.6%	0.0%	0.8%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	14.6%	26.1%
1982	794	2,3,4,5,6	11.1%	1.4%	1.0%	13.9%	0.0%	7.1%	0.0%	0.0%	0.0%	1.0%	0.6%	0.0%	1.1%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	22.3%	39.5%
1983	714	3,4,5,6	21.1%	0.6%	0.0%	15.3%	0.0%	7.6%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	19.6%	34.7%
1984	821	2,4,5,6	13.5%	0.1%	0.0%	18.5%	0.0%	3.5%	0.0%	0.0%	0.0%	3.4%	1.1%	0.0%	0.2%	0.0%	0.2%	0.0%	0.0%	0.0%	0.2%	19.9%	39.2%
1985	681	2,3,5,6	17.2%	4.0%	0.0%	17.6%	0.0%	1.9%	0.0%	0.0%	0.0%	1.3%	0.3%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	19.5%	37.9%
1986	640	2,3,4,6	20.3%	0.0%	0.0%	14.8%	0.0%	3.1%	0.0%	0.0%	0.0%	4.4%	0.5%	0.0%	0.5%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	14.8%	40.9%
1987	843	2,3,4,5	17.1%	0.0%	0.0%	16.1%	0.0%	3.1%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	2.5%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	21.2%	38.3%
1988	1423	2,3,4,5,6	15.2%	1.3%	0.0%	7.9%	0.0%	4.8%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.9%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	13.1%	54.3%
1989	1504	2,3,4,5,6	17.6%	0.0%	0.0%	16.2%	0.0%	4.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	3.3%	0.0%	0.4%	0.0%	0.3%	0.0%	0.0%	20.9%	35.6%
1990	1804	2,3,4,5,6	18.5%	2.2%	0.0%	12.3%	1.4%	8.1%	0.0%	0.0%	0.0%	0.3%	0.8%	0.0%	3.0%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	20.8%	31.1%
1991	2890	2,3,4,5,6	24.3%	0.0%	0.6%	16.4%	0.8%	6.2%	0.0%	0.0%	0.0%	0.1%	0.7%	0.0%	0.2%	0.0%	0.2%	0.0%	0.2%	0.0%	0.0%	22.1%	28.2%
1992	3309	2,3,4,5,6	4.6%	4.3%	0.0%	7.8%	2.0%	16.8%	0.0%	0.0%	0.0%	0.9%	0.3%	0.0%	2.0%	0.0%	0.5%	0.0%	0.2%	0.0%	0.0%	14.3%	46.2%
1993	2992	2,3,4,5,6	9.7%	0.5%	0.2%	15.2%	0.9%	17.7%	0.0%	0.0%	0.0%	0.2%	0.4%	0.0%	2.9%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	28.9%	23.2%
1994	4648	2,3,4,5,6	15.3%	0.6%	1.0%	15.0%	1.9%	4.9%	0.0%	0.0%	0.0%	0.2%	0.1%	0.0%	1.4%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	16.1%	43.0%
1995	4342	2,3,4,5,6	10.3%	0.4%	0.4%	5.7%	1.3%	1.1%	0.2%	0.0%	0.0%	0.1%	0.1%	0.0%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	29.5%	50.5%
1996	2374	2,3,4,5,6	20.6%	0.0%	0.0%	2.8%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	45.3%	25.6%
1997	4371	2,3,4,5,6	32.4%	0.0%	1.7%	3.4%	0.5%	0.2%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	1.4%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	18.1%	41.9%
1998	3092	2,3,4,5,6	11.7%	1.0%	0.5%	11.8%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	1.0%	0.0%	0.0%	0.0%	0.1%	30.4%	41.2%
1999	2378	2,3,4,5,6	18.2%	0.2%	0.0%	4.8%	5.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	31.3%	37.8%
2000	2932	2,3,4,5,6	17.5%	0.0%	0.7%	3.4%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	19.3%	55.4%
2001	4004	2,3,4,5,6	16.8%	0.0%	1.0%	3.8%	2.0%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	1.6%	0.0%	0.0%	0.0%	0.1%	24.3%	47.1%
2002	5481	2,3,4,5,6	22.3%	0.0%	1.1%	8.0%	2.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	30.8%	31.3%
2003	5115	2,3,4,5,6	15.5%	1.6%	0.7%	6.6%	2.1%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	2.9%	0.0%	0.0%	0.0%	0.0%	31.2%	37.6%
2004	5492	2,3,4,5,6	20.6%	1.4%	0.9%	7.8%	5.2%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	21.8%	38.6%
2005	4924	2,3,4,5,6	21.3%	0.0%	1.3%	8.9%	6.0%	2.5%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.1%	1.3%	0.0%	0.0%	0.0%	0.0%	29.4%	27.6%
2006	2130	2,3,4,5,6	26.9%	0.0%	1.9%	12.6%	6.9%	2.0%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	3.0%	0.0%	0.0%	0.0%	0.1%	24.7%	18.3%
2007	1595	2,3,4,5,6	14.6%	0.0%	1.0%	6.6%	5.3%	0.1%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	34.4%	36.2%
2008	1985	2,3,4,5,6	17.9%	0.0%	1.7%	7.6%	5.7%	0.8%	1.3%	0.0%	0.0%	0.0%	0.3%	0.0%	1.1%	0.0%	0.8%	0.1%	0.0%	0.0%	0.0%	12.9%	49.9%
2009	2836	2,3,4,5,6	20.3%	1.0%	2.9%	14.0%	5.7%	0.4%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	22.6%	31.6%
2010	4313	2,3,4,5,6	14.4%	0.0%	1.7%	7.8%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.7%	0.1%	0.0%	0.0%	0.0%	41.8%	30.9%
1979-2010	2651		18.1%	0.7%	0.7%	11.0%	2.0%	3.6%	0.2%	0.0%	0.0%	0.5%	0.3%	0.0%	1.2%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	23.5%	37.1%
1979-1984	817		20.1%	0.4%	0.5%	17.1%	0.0%	6.1%	0.1%	0.0%	0.0%	1.3%	1.2%	0.0%	0.7%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	18.1%	33.8%
1985-1995	2280		15.5%	1.2%	0.2%	13.2%	0.8%	6.6%	0.0%	0.0%	0.0%	0.8%	0.4%	0.0%	1.5%	0.0%	0.6%	0.0%	0.1%	0.0%	0.0%	20.1%	39.0%
1996-1998	3279		21.6%	0.3%	0.7%	6.0%	0.9%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	31.3%	36.2%
1999-2010	3599		18.9%	0.4%	1.2%	7.7%	4.3%	0.7%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	27.0%	36.9%

Appendix C.79. Percent distribution of Skagit Summer Fingerling (Skagit Wild) reported catch among fisheries and escapement.

	Estimated		AABM							ISBM													
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	3	2	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	6	2,3	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1998	179	2,3,4	3.4%	0.0%	0.0%	0.0%	1.1%	1.7%	6.7%	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.0%	84.4%
1999	164	2,3,4,5	7.3%	0.6%	0.0%	0.0%	0.0%	0.0%	20.7%	0.0%	6.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	63.4%
2000	219	2,3,4,5	5.9%	0.9%	0.0%	0.0%	0.0%	2.3%	7.8%	0.0%	6.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	5.5%	0.0%	0.0%	0.0%	68.5%
2001	766	2,3,4,5	6.5%	1.6%	0.9%	0.0%	0.9%	9.1%	6.3%	0.0%	8.6%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.3%	1.3%	0.0%	0.5%	0.0%	63.8%
2002	2150	2,3,4,5	12.7%	0.0%	0.8%	1.4%	1.1%	6.5%	1.6%	0.0%	3.9%	0.0%	0.3%	0.0%	0.1%	0.0%	0.0%	0.2%	0.0%	0.0%	0.7%	0.0%	70.5%
2003	829	2,3,4,5	6.3%	0.1%	0.0%	3.9%	2.3%	11.0%	3.7%	0.0%	6.0%	0.0%	0.1%	0.0%	0.4%	0.0%	0.4%	0.5%	0.4%	0.0%	0.2%	0.0%	64.8%
2004	798	2,3,4,5	5.0%	0.0%	0.0%	2.4%	0.5%	10.8%	1.3%	0.0%	0.8%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	1.0%	0.4%	0.0%	0.0%	0.0%	77.2%
2005	906	2,3,4,5	7.3%	0.2%	0.0%	1.4%	4.5%	7.1%	4.0%	0.0%	1.8%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.1%	0.7%	0.0%	3.8%	0.2%	68.7%
2006	1347	2,3,4,5	3.1%	0.8%	0.1%	0.6%	2.7%	4.2%	3.0%	0.0%	2.0%	0.0%	0.1%	0.0%	0.4%	0.0%	0.0%	0.2%	0.5%	0.0%	3.0%	0.0%	79.1%
2007	1423	2,3,4,5	5.4%	0.4%	0.2%	0.9%	0.9%	8.6%	3.4%	0.0%	0.6%	0.0%	0.1%	0.0%	0.8%	0.0%	0.0%	0.2%	0.4%	0.0%	2.8%	0.0%	75.1%
2008	1076	2,3,4,5	4.6%	0.0%	0.0%	1.3%	1.5%	5.2%	5.3%	0.0%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	1.1%	0.0%	18.1%	0.0%	60.8%
2009	783	2,3,4,5	6.8%	0.8%	0.8%	1.5%	1.1%	3.6%	7.5%	0.0%	3.6%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.1%	2.4%	0.0%	35.5%	0.0%	36.0%
2010	533	3,4,5	7.3%	0.6%	0.2%	1.5%	3.4%	4.9%	3.4%	0.0%	2.8%	0.0%	0.4%	0.0%	0.8%	0.0%	0.0%	0.8%	2.6%	0.0%	7.5%	0.4%	63.6%
1979-2010	859		6.3%	0.5%	0.2%	1.2%	1.5%	5.8%	5.8%	0.0%	3.6%	0.0%	0.1%	0.0%	0.3%	0.0%	0.0%	0.5%	1.3%	0.0%	5.6%	0.0%	67.4%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1996-1998	179		3.4%	0.0%	0.0%	0.0%	1.1%	1.7%	6.7%	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.0%	84.4%
1999-2010	916		6.5%	0.5%	0.3%	1.2%	1.6%	6.1%	5.7%	0.0%	3.8%	0.0%	0.1%	0.0%	0.3%	0.0%	0.0%	0.5%	1.3%	0.0%	6.1%	0.0%	66.0%

Appendix C.80. Percent distribution of Skagit Summer Fingerling (Skagit Wild) total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	5	2	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	12	2,3	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1998	183	2,3,4	3.8%	0.0%	0.0%	0.0%	1.1%	1.6%	6.6%	0.0%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	82.5%
1999	189	2,3,4,5	10.6%	1.1%	0.0%	0.0%	0.0%	0.0%	20.6%	0.0%	11.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	55.0%
2000	274	2,3,4,5	9.9%	1.1%	0.0%	0.0%	0.0%	3.3%	8.0%	0.0%	11.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	9.5%	0.0%	0.0%	0.0%	54.7%
2001	863	2,3,4,5	9.3%	3.2%	1.0%	0.0%	1.2%	8.6%	6.7%	0.0%	10.4%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.2%	2.1%	0.0%	0.5%	0.0%	56.7%
2002	2280	2,3,4,5	13.3%	0.0%	0.9%	1.5%	1.4%	6.4%	1.8%	0.0%	4.3%	0.0%	2.9%	0.0%	0.1%	0.0%	0.0%	0.2%	0.0%	0.0%	0.7%	0.0%	66.5%
2003	884	2,3,4,5	6.8%	0.2%	0.0%	4.2%	3.2%	10.9%	4.9%	0.0%	7.1%	0.0%	0.2%	0.0%	0.3%	0.0%	0.3%	0.5%	0.5%	0.0%	0.2%	0.0%	60.7%
2004	826	2,3,4,5	5.7%	0.0%	0.0%	2.9%	0.7%	11.3%	1.5%	0.0%	1.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	1.0%	0.6%	0.0%	0.0%	0.0%	74.6%
2005	970	2,3,4,5	8.6%	0.3%	0.0%	1.6%	6.3%	7.0%	4.6%	0.0%	2.2%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.1%	0.9%	0.0%	3.6%	0.2%	64.1%
2006	1397	2,3,4,5	3.6%	1.1%	0.2%	0.6%	3.4%	4.3%	3.5%	0.0%	2.5%	0.0%	0.1%	0.0%	0.5%	0.0%	0.0%	0.2%	0.6%	0.0%	3.1%	0.0%	76.2%
2007	1477	2,3,4,5	6.4%	0.9%	0.2%	1.0%	1.2%	8.8%	3.8%	0.0%	0.7%	0.0%	0.1%	0.0%	0.9%	0.0%	0.0%	0.2%	0.6%	0.0%	2.8%	0.0%	72.4%
2008	1125	2,3,4,5	5.6%	0.0%	0.0%	1.5%	1.7%	5.2%	6.0%	0.0%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	1.4%	0.0%	18.0%	0.0%	58.1%
2009	840	2,3,4,5	7.7%	1.0%	0.8%	1.7%	1.4%	3.6%	8.2%	0.0%	4.3%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.1%	3.1%	0.0%	34.3%	0.0%	33.6%
2010	559	3,4,5	7.2%	0.9%	0.2%	1.6%	4.1%	4.7%	4.1%	0.0%	3.4%	0.0%	0.4%	0.0%	0.9%	0.0%	0.0%	0.7%	3.2%	0.0%	7.7%	0.4%	60.6%
1979-2010	913		7.6%	0.7%	0.3%	1.3%	2.0%	5.8%	6.2%	0.0%	4.9%	0.0%	0.3%	0.0%	0.3%	0.0%	0.0%	0.4%	1.9%	0.0%	5.5%	0.0%	62.8%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1996-1998	183		3.8%	0.0%	0.0%	0.0%	1.1%	1.6%	6.6%	0.0%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	82.5%
1999-2010	974		7.9%	0.8%	0.3%	1.4%	2.0%	6.2%	6.2%	0.0%	5.1%	0.0%	0.3%	0.0%	0.3%	0.0%	0.0%	0.4%	1.9%	0.0%	6.0%	0.0%	61.1%

Appendix C.81. Percent distribution of Stillaguamish Fall Fingerling (Stillaguamish Wild) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	10	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	42	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	83	2,3,4	0.0%	0.0%	0.0%	3.6%	3.6%	7.2%	0.0%	0.0%	15.7%	19.3%	26.5%	0.0%	0.0%	0.0%	0.0%	4.8%	19.3%	0.0%	0.0%	0.0%	0.0%
1985	97	2,3,4,5	7.2%	0.0%	0.0%	4.1%	0.0%	29.9%	9.3%	0.0%	10.3%	0.0%	15.5%	0.0%	0.0%	0.0%	0.0%	9.3%	13.4%	0.0%	0.0%	0.0%	1.0%
1986	89	3,4,5	4.5%	0.0%	0.0%	0.0%	0.0%	32.6%	0.0%	0.0%	20.2%	0.0%	4.5%	0.0%	0.0%	0.0%	0.0%	16.9%	21.3%	0.0%	0.0%	0.0%	0.0%
1987	41	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	57	2,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	255	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	339	2,3,4	0.6%	0.0%	0.0%	0.9%	0.0%	21.2%	6.5%	0.6%	9.4%	8.0%	10.9%	0.0%	5.6%	0.0%	0.0%	7.4%	13.6%	0.0%	2.1%	0.0%	13.3%
1991	916	2,3,4,5	0.2%	0.0%	0.0%	0.0%	0.4%	4.7%	2.3%	0.0%	3.6%	0.0%	1.0%	0.0%	4.3%	0.0%	0.0%	3.7%	6.4%	0.0%	1.9%	0.0%	71.5%
1992	636	2,3,4,5	0.0%	0.0%	0.0%	0.5%	0.0%	18.1%	4.2%	0.0%	5.3%	0.0%	5.2%	0.0%	6.0%	0.0%	0.0%	10.2%	29.6%	0.0%	2.4%	0.0%	18.6%
1993	817	2,3,4,5	0.0%	0.0%	0.0%	0.6%	1.2%	11.3%	9.7%	0.2%	8.3%	0.4%	2.3%	0.0%	5.3%	0.0%	0.4%	0.5%	20.2%	0.0%	1.0%	0.0%	38.7%
1994	451	2,3,4,5	2.4%	0.0%	0.0%	0.7%	0.0%	6.7%	5.3%	0.0%	7.8%	0.0%	2.2%	0.0%	0.0%	0.0%	0.0%	2.2%	5.8%	0.0%	0.2%	0.0%	66.7%
1995	378	2,3,4,5	2.4%	0.0%	0.0%	0.0%	0.0%	2.4%	9.8%	0.0%	4.2%	0.0%	10.8%	0.0%	1.1%	0.0%	0.0%	2.1%	14.0%	0.0%	0.3%	0.0%	52.9%
1996	679	2,3,4,5	0.9%	0.0%	0.0%	0.0%	1.0%	0.0%	7.1%	0.0%	6.0%	0.0%	7.2%	0.0%	0.0%	0.0%	0.0%	0.0%	18.7%	0.0%	0.3%	0.0%	58.8%
1997	759	2,3,4,5	9.1%	0.4%	0.0%	0.5%	0.9%	6.2%	5.0%	0.0%	4.7%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	1.4%	15.4%	0.0%	0.5%	0.0%	54.4%
1998	1040	2,3,4,5	9.4%	0.1%	0.3%	1.0%	0.5%	1.0%	2.2%	0.0%	1.6%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	1.4%	1.9%	0.0%	0.3%	0.0%	80.2%
1999	650	2,3,4,5	0.6%	0.3%	0.0%	0.0%	0.3%	2.9%	7.4%	0.0%	5.7%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.3%	2.5%	0.0%	0.2%	0.0%	79.4%
2000	955	2,3,4,5	3.8%	0.0%	0.0%	0.0%	0.0%	6.0%	1.3%	0.0%	1.5%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	1.4%	0.0%	0.1%	0.0%	85.7%
2001	286	3,4,5	2.1%	0.0%	0.0%	0.0%	0.0%	5.6%	4.2%	0.0%	4.5%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	1.0%	10.1%	0.0%	0.3%	0.0%	71.7%
2002	308	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	13	5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	98	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	455	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	778	2,3,4	2.2%	0.0%	0.0%	0.0%	0.8%	11.2%	1.0%	0.0%	2.4%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	1.7%	2.3%	0.0%	0.6%	0.0%	77.1%
2007	656	2,3,4,5	0.6%	0.6%	0.0%	0.0%	0.0%	15.7%	5.9%	0.0%	9.0%	0.0%	0.5%	0.0%	1.7%	0.0%	0.0%	4.3%	5.0%	0.0%	0.6%	0.0%	56.1%
2008	1122	2,3,4,5	1.6%	0.0%	0.0%	0.0%	0.0%	4.9%	5.2%	0.0%	4.8%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.5%	9.6%	0.0%	3.4%	0.0%	69.9%
2009	881	2,3,4,5	1.2%	0.1%	0.2%	0.3%	0.5%	2.3%	4.1%	0.0%	7.2%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	1.2%	5.8%	0.0%	4.1%	0.0%	72.8%
2010	772	2,3,4,5	0.8%	0.0%	0.0%	0.0%	5.4%	8.5%	7.3%	0.0%	1.7%	0.0%	0.0%	0.0%	2.1%	0.0%	0.4%	3.5%	7.0%	0.0%	2.5%	0.0%	60.9%
1979-2010	619		2.5%	0.1%	0.0%	0.6%	0.7%	9.9%	4.9%	0.0%	6.7%	1.4%	4.4%	0.0%	1.4%	0.0%	0.0%	3.6%	11.2%	0.0%	1.0%	0.0%	51.5%
1979-1984	83		0.0%	0.0%	0.0%	3.6%	3.6%	7.2%	0.0%	0.0%	15.7%	19.3%	26.5%	0.0%	0.0%	0.0%	0.0%	4.8%	19.3%	0.0%	0.0%	0.0%	0.0%
1985-1995	465		2.2%	0.0%	0.0%	0.8%	0.2%	15.8%	5.9%	0.1%	8.7%	1.0%	6.6%	0.0%	2.8%	0.0%	0.0%	6.5%	15.5%	0.0%	1.0%	0.0%	32.8%
1996-1998	826		6.5%	0.2%	0.1%	0.5%	0.8%	2.4%	4.8%	0.0%	4.1%	0.0%	2.9%	0.0%	0.0%	0.0%	0.0%	1.0%	12.0%	0.0%	0.4%	0.0%	64.5%
1999-2010	762		1.6%	0.1%	0.0%	0.0%	0.9%	7.1%	4.5%	0.0%	4.6%	0.0%	0.1%	0.0%	0.7%	0.0%	0.0%	1.6%	5.5%	0.0%	1.5%	0.0%	71.7%

Appendix C.82. Percent distribution of Stillaguamish Fall Fingerling (Stillaguamish Wild) total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM														
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			Esc.
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	15	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	56	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	108	2,3,4	0.9%	0.0%	0.0%	3.7%	2.8%	10.2%	0.0%	0.0%	13.9%	16.7%	21.3%	0.0%	0.0%	0.0%	0.0%	4.6%	25.9%	0.0%	0.0%	0.0%	0.0%
1985	114	2,3,4,5	7.0%	0.0%	0.0%	4.4%	0.0%	29.8%	8.8%	0.0%	9.6%	0.0%	13.2%	0.0%	0.0%	0.0%	0.0%	8.8%	17.5%	0.0%	0.0%	0.0%	0.9%
1986	96	3,4,5	5.2%	0.0%	0.0%	0.0%	0.0%	32.3%	0.0%	0.0%	20.8%	0.0%	4.2%	0.0%	0.0%	0.0%	0.0%	15.6%	21.9%	0.0%	0.0%	0.0%	0.0%
1987	42	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	114	2,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	325	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	420	2,3,4	0.7%	0.0%	0.0%	1.0%	0.2%	21.0%	6.0%	0.7%	11.2%	7.4%	9.5%	0.0%	6.4%	0.0%	0.0%	6.9%	16.2%	0.0%	2.1%	0.0%	10.7%
1991	977	2,3,4,5	0.2%	0.0%	0.0%	0.0%	0.4%	5.4%	2.5%	0.0%	4.8%	0.0%	0.9%	0.0%	4.8%	0.0%	0.0%	3.7%	8.4%	0.0%	1.8%	0.0%	67.0%
1992	935	2,3,4,5	0.0%	0.0%	0.0%	0.4%	0.0%	17.1%	3.5%	0.0%	7.8%	0.0%	4.0%	0.0%	5.5%	0.0%	0.0%	8.7%	38.2%	0.0%	2.2%	0.0%	12.6%
1993	932	2,3,4,5	0.0%	0.0%	0.0%	0.8%	1.1%	13.4%	9.2%	0.3%	9.7%	0.5%	2.1%	0.0%	5.8%	0.0%	0.3%	0.4%	21.5%	0.0%	1.0%	0.0%	33.9%
1994	479	2,3,4,5	2.7%	0.0%	0.0%	0.6%	0.0%	7.3%	5.6%	0.0%	9.2%	0.0%	2.3%	0.0%	0.0%	0.0%	0.0%	2.1%	7.1%	0.0%	0.2%	0.0%	62.8%
1995	501	2,3,4,5	2.4%	0.0%	0.0%	0.0%	0.0%	3.4%	9.0%	0.0%	7.0%	0.0%	12.6%	0.0%	0.8%	0.0%	0.0%	2.0%	22.8%	0.0%	0.2%	0.0%	39.9%
1996	828	2,3,4,5	1.1%	0.0%	0.0%	0.0%	0.8%	1.1%	6.8%	0.0%	8.5%	0.0%	8.2%	0.0%	0.0%	0.0%	0.0%	0.0%	25.1%	0.0%	0.2%	0.0%	48.2%
1997	841	2,3,4,5	9.9%	0.7%	0.0%	0.5%	1.2%	6.8%	4.9%	0.0%	5.4%	0.0%	1.8%	0.0%	0.0%	0.0%	0.0%	1.3%	18.1%	0.0%	0.5%	0.0%	49.1%
1998	1093	2,3,4,5	10.5%	0.4%	0.4%	1.6%	0.8%	0.9%	2.5%	0.0%	2.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	1.5%	2.7%	0.0%	0.3%	0.0%	76.3%
1999	680	2,3,4,5	0.7%	1.0%	0.0%	0.0%	0.3%	2.9%	7.9%	0.0%	6.9%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.3%	3.4%	0.0%	0.1%	0.0%	75.9%
2000	978	2,3,4,5	4.4%	0.0%	0.0%	0.0%	0.0%	6.1%	1.4%	0.0%	1.8%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	2.0%	0.0%	0.1%	0.0%	83.6%
2001	302	3,4,5	2.0%	0.0%	0.0%	0.0%	0.0%	5.3%	4.3%	0.0%	4.6%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	1.0%	14.2%	0.0%	0.3%	0.0%	67.9%
2002	308	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	13	5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	131	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	495	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	819	2,3,4	2.4%	0.1%	0.0%	0.0%	0.9%	11.7%	1.3%	0.0%	3.7%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	1.7%	3.5%	0.0%	0.6%	0.0%	73.3%
2007	807	2,3,4,5	1.0%	1.1%	0.0%	0.0%	0.0%	14.7%	6.1%	0.0%	15.7%	0.0%	0.9%	0.0%	1.9%	0.0%	0.0%	4.1%	8.3%	0.0%	0.6%	0.0%	45.6%
2008	1196	2,3,4,5	2.4%	0.0%	0.0%	0.0%	0.0%	4.8%	5.7%	0.0%	5.9%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.5%	11.5%	0.0%	3.4%	0.0%	65.6%
2009	961	2,3,4,5	1.2%	0.1%	0.3%	0.3%	0.6%	2.3%	4.6%	0.0%	9.7%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	1.2%	8.6%	0.0%	4.1%	0.0%	66.7%
2010	846	2,3,4,5	1.2%	0.0%	0.0%	0.0%	6.7%	8.3%	8.5%	0.0%	2.4%	0.0%	0.0%	0.0%	2.4%	0.0%	0.5%	3.4%	8.7%	0.0%	2.4%	0.0%	55.6%
1979-2010	696		2.8%	0.2%	0.0%	0.7%	0.8%	10.2%	4.9%	0.1%	8.0%	1.2%	4.1%	0.0%	1.5%	0.0%	0.0%	3.4%	14.3%	0.0%	1.0%	0.0%	46.8%
1979-1984	108		0.9%	0.0%	0.0%	3.7%	2.8%	10.2%	0.0%	0.0%	13.9%	16.7%	21.3%	0.0%	0.0%	0.0%	0.0%	4.6%	25.9%	0.0%	0.0%	0.0%	0.0%
1985-1995	557		2.3%	0.0%	0.0%	0.9%	0.2%	16.2%	5.6%	0.1%	10.0%	1.0%	6.1%	0.0%	2.9%	0.0%	0.0%	6.0%	19.2%	0.0%	1.0%	0.0%	28.5%
1996-1998	921		7.2%	0.4%	0.1%	0.7%	1.0%	2.9%	4.7%	0.0%	5.3%	0.0%	3.4%	0.0%	0.0%	0.0%	0.0%	0.9%	15.3%	0.0%	0.3%	0.0%	57.9%
1999-2010	824		1.9%	0.3%	0.0%	0.0%	1.1%	7.0%	5.0%	0.0%	6.3%	0.0%	0.2%	0.0%	0.7%	0.0%	0.1%	1.5%	7.6%	0.0%	1.5%	0.0%	66.8%

Appendix C.83. Percent distribution of Columbia River Summers (Columbia River Summers) reported catch among fisheries and escapement.

	Estimated		AABM							ISBM												
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	163	2,3,4	11.0%	0.0%	1.2%	6.7%	0.0%	16.6%	0.0%	3.1%	4.9%	2.5%	11.7%	0.0%	0.0%	0.0%	4.9%	0.0%	0.0%	0.0%	4.3%	0.0%	33.1%
1980	326	3,4,5	33.1%	0.0%	0.9%	8.9%	0.0%	17.2%	0.0%	0.0%	0.0%	4.0%	1.2%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	32.5%
1981	312	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	24	5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	13	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	76	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	123	2,3,4	13.8%	0.0%	0.0%	5.7%	3.3%	0.0%	0.0%	0.0%	0.0%	4.9%	4.1%	0.0%	20.3%	0.0%	0.0%	0.0%	0.0%	0.0%	15.4%	0.0%	32.5%
1988	262	2,3,4,5	1.1%	1.1%	0.0%	7.6%	1.9%	16.0%	4.2%	0.0%	0.0%	0.0%	9.2%	0.0%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%	15.3%	3.1%	37.0%
1989	610	2,3,4,5	4.9%	0.5%	0.7%	5.2%	0.7%	15.2%	2.5%	0.0%	1.5%	0.7%	2.6%	0.0%	14.8%	0.0%	2.6%	0.0%	0.0%	0.0%	8.7%	0.0%	39.5%
1990	816	2,3,4,5	10.0%	0.0%	0.0%	6.9%	0.0%	20.2%	0.0%	0.0%	0.6%	1.1%	1.7%	0.0%	5.9%	0.0%	2.3%	0.0%	0.0%	0.0%	11.2%	0.2%	39.8%
1991	594	2,3,4,5	4.9%	0.0%	0.0%	2.7%	0.0%	6.9%	0.8%	0.0%	0.0%	0.7%	3.4%	0.0%	4.0%	0.0%	2.0%	0.0%	0.0%	0.0%	4.9%	0.5%	69.2%
1992	282	2,3,4,5	14.5%	0.0%	0.0%	3.5%	0.0%	15.2%	0.0%	0.0%	0.7%	2.1%	1.1%	0.0%	6.7%	0.0%	0.0%	0.0%	1.4%	0.0%	1.4%	0.0%	53.2%
1993	205	2,3,4,5	7.3%	0.0%	0.0%	1.5%	0.0%	14.6%	2.0%	0.0%	0.0%	0.0%	2.4%	0.0%	5.4%	0.0%	1.5%	0.0%	0.0%	0.0%	3.4%	0.0%	62.0%
1994	35	2,3,4,5	14.3%	0.0%	0.0%	0.0%	14.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.4%	0.0%	60.0%
1995	148	2,3,4,5	2.7%	0.0%	0.0%	0.0%	0.0%	4.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	89.2%
1996	346	2,3,4,5	13.9%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	0.0%	2.9%	0.0%	2.9%	0.0%	0.9%	0.0%	1.2%	0.0%	4.0%	2.3%	69.4%
1997	1229	2,3,4,5	8.1%	0.1%	3.4%	0.2%	1.1%	1.9%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	3.1%	0.0%	0.0%	0.0%	0.2%	0.0%	1.2%	0.5%	80.1%
1998	1500	2,3,4,5	8.5%	0.1%	0.9%	0.5%	1.8%	0.0%	0.5%	0.0%	0.0%	0.0%	0.1%	0.0%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	4.9%	0.9%	80.1%
1999	841	2,3,4,5	9.9%	0.5%	1.8%	0.6%	2.0%	0.6%	4.9%	0.0%	0.0%	0.0%	0.6%	0.0%	8.3%	0.0%	0.5%	0.0%	0.0%	0.0%	1.2%	2.9%	66.3%
2000	2472	2,3,4,5	20.7%	1.2%	2.5%	0.5%	2.1%	4.7%	5.1%	0.0%	0.6%	0.0%	0.4%	0.0%	2.9%	0.0%	1.3%	0.0%	0.2%	0.0%	1.0%	2.2%	54.7%
2001	6674	2,3,4,5	13.3%	1.5%	1.4%	0.5%	1.4%	13.2%	2.5%	0.0%	0.2%	0.0%	0.0%	0.0%	16.6%	0.0%	3.7%	0.0%	0.6%	0.0%	0.7%	1.6%	42.7%
2002	10424	2,3,4,5	21.6%	0.0%	1.4%	12.3%	1.6%	15.2%	1.2%	0.0%	0.1%	0.0%	0.0%	0.0%	8.4%	0.0%	3.4%	0.0%	0.0%	0.0%	1.0%	2.2%	31.3%
2003	7235	2,3,4,5	25.7%	0.4%	1.0%	11.1%	2.0%	12.2%	0.3%	0.0%	0.1%	0.0%	0.0%	0.0%	6.4%	0.0%	1.0%	0.0%	0.1%	0.0%	2.9%	5.8%	30.9%
2004	4537	2,3,4,5	13.1%	0.3%	1.1%	5.1%	1.3%	12.5%	1.3%	0.0%	0.2%	0.0%	0.0%	0.0%	10.3%	0.0%	1.5%	0.0%	0.2%	0.0%	7.8%	14.7%	30.6%
2005	9651	2,3,4,5	8.3%	0.0%	0.6%	5.6%	2.1%	10.4%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	5.9%	0.0%	0.5%	0.0%	0.0%	0.0%	7.0%	7.6%	51.1%
2006	3642	2,3,4,5	10.8%	0.1%	0.5%	3.5%	1.1%	11.1%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	0.0%	0.4%	0.2%	0.1%	0.0%	13.3%	9.8%	45.1%
2007	4767	2,3,4,5	9.2%	0.7%	1.0%	1.2%	1.7%	5.9%	1.1%	0.0%	0.1%	0.0%	0.0%	0.0%	3.5%	0.0%	0.4%	0.0%	0.1%	0.0%	9.4%	13.0%	52.8%
2008	1511	2,3,4,5	6.3%	0.3%	0.4%	1.0%	0.3%	4.3%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	0.0%	0.3%	0.0%	0.1%	0.0%	22.7%	9.9%	49.2%
2009	998	2,3,4,5	6.2%	0.3%	0.2%	1.4%	0.2%	10.8%	10.4%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	0.0%	0.3%	0.0%	0.0%	0.0%	9.4%	5.5%	52.9%
2010	1437	2,3,4,5	8.1%	0.0%	0.4%	1.7%	3.0%	2.2%	0.6%	0.0%	1.5%	0.0%	0.0%	0.0%	4.2%	0.0%	0.7%	0.0%	0.0%	0.0%	20.7%	8.1%	49.0%
1979-2010	2340		11.6%	0.3%	0.7%	3.6%	1.6%	8.9%	1.6%	0.1%	0.5%	0.6%	1.6%	0.0%	5.6%	0.0%	1.1%	0.1%	0.2%	0.0%	7.1%	3.5%	51.3%
1979-1984	244		22.1%	0.0%	1.1%	7.8%	0.0%	16.9%	0.0%	1.5%	2.5%	3.2%	6.4%	0.0%	0.8%	0.0%	2.5%	0.0%	0.0%	0.0%	2.5%	0.0%	32.8%
1985-1995	342		8.2%	0.2%	0.1%	3.7%	2.2%	10.3%	1.1%	0.0%	0.3%	1.0%	2.7%	0.0%	7.0%	0.0%	0.9%	0.2%	0.2%	0.0%	8.0%	0.4%	53.6%
1996-1998	1025		10.1%	0.2%	1.4%	0.2%	1.0%	0.6%	0.2%	0.0%	0.8%	0.0%	1.1%	0.0%	2.6%	0.0%	0.3%	0.0%	0.4%	0.0%	3.4%	1.2%	76.5%
1999-2010	4516		12.8%	0.4%	1.0%	3.7%	1.6%	8.6%	2.7%	0.0%	0.2%	0.0%	0.1%	0.0%	6.1%	0.0%	1.2%	0.0%	0.1%	0.0%	8.1%	6.9%	46.4%

Appendix C.84. Percent distribution of Columbia River Summers (Columbia River Summers) total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	197	2,3,4	14.7%	0.0%	1.0%	8.1%	1.5%	17.8%	0.0%	2.5%	4.6%	3.6%	10.2%	0.0%	0.5%	0.0%	4.1%	0.0%	0.0%	0.0%	4.1%	0.0%	27.4%
1980	338	3,4,5	33.4%	0.0%	0.9%	9.2%	0.0%	17.5%	0.0%	0.0%	0.0%	4.1%	1.2%	0.0%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	31.4%
1981	315	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	24	5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	22	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	87	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	161	2,3,4	15.5%	0.6%	0.0%	8.1%	2.5%	7.5%	0.0%	0.0%	0.0%	3.7%	4.3%	0.0%	19.9%	0.0%	0.6%	0.0%	0.0%	0.0%	12.4%	0.0%	24.8%
1988	315	2,3,4,5	1.6%	3.5%	0.0%	9.5%	1.9%	20.0%	4.1%	0.0%	0.0%	0.0%	8.9%	0.0%	3.5%	0.0%	0.0%	0.0%	0.0%	0.0%	13.3%	2.9%	30.8%
1989	700	2,3,4,5	6.6%	2.9%	0.7%	5.6%	0.6%	16.7%	2.4%	0.0%	1.6%	0.7%	2.4%	0.0%	15.1%	0.0%	2.6%	0.0%	0.0%	0.0%	7.7%	0.0%	34.4%
1990	863	2,3,4,5	10.9%	0.0%	0.0%	7.6%	0.0%	21.1%	0.0%	0.0%	0.6%	1.2%	1.7%	0.0%	5.9%	0.0%	2.4%	0.0%	0.0%	0.0%	10.7%	0.2%	37.7%
1991	607	2,3,4,5	5.1%	0.0%	0.0%	2.8%	0.0%	7.6%	0.8%	0.0%	0.0%	0.7%	3.5%	0.0%	4.3%	0.0%	2.1%	0.0%	0.0%	0.0%	4.9%	0.5%	67.7%
1992	306	2,3,4,5	18.3%	0.0%	0.0%	3.6%	0.0%	15.7%	0.0%	0.0%	0.7%	2.0%	1.0%	0.0%	6.9%	0.0%	0.0%	0.0%	1.6%	0.0%	1.3%	0.0%	49.0%
1993	213	2,3,4,5	8.0%	0.0%	0.0%	1.4%	0.0%	16.0%	1.9%	0.0%	0.0%	0.0%	2.8%	0.0%	5.6%	0.0%	1.4%	0.0%	0.0%	0.0%	3.3%	0.0%	59.6%
1994	38	2,3,4,5	18.4%	0.0%	0.0%	0.0%	15.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.5%	0.0%	55.3%
1995	157	2,3,4,5	3.8%	0.0%	0.0%	0.0%	0.0%	6.4%	0.0%	0.0%	0.0%	0.0%	1.3%	0.0%	1.9%	0.0%	0.0%	2.5%	0.0%	0.0%	0.0%	0.0%	84.1%
1996	420	2,3,4,5	21.7%	1.0%	0.0%	1.9%	0.2%	2.6%	0.0%	0.0%	2.6%	0.0%	3.1%	0.0%	2.6%	0.0%	0.7%	0.0%	1.2%	0.0%	3.3%	1.9%	57.1%
1997	1270	2,3,4,5	9.3%	0.1%	3.9%	0.2%	1.7%	2.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	3.1%	0.0%	0.0%	0.0%	0.2%	0.0%	1.2%	0.5%	77.5%
1998	1558	2,3,4,5	10.0%	0.3%	1.2%	0.5%	2.7%	0.0%	0.6%	0.0%	0.0%	0.0%	0.1%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	4.7%	1.0%	77.1%
1999	955	2,3,4,5	14.3%	0.7%	3.0%	0.6%	3.0%	0.5%	5.2%	0.0%	0.0%	0.0%	0.6%	0.0%	9.1%	0.0%	0.5%	0.0%	0.0%	0.0%	1.0%	2.7%	58.4%
2000	2804	2,3,4,5	24.6%	1.8%	3.2%	0.6%	3.0%	4.4%	5.3%	0.0%	0.7%	0.0%	0.5%	0.0%	3.1%	0.0%	1.3%	0.1%	0.2%	0.0%	0.9%	2.0%	48.2%
2001	7332	2,3,4,5	15.5%	2.8%	1.4%	0.5%	1.8%	12.4%	2.7%	0.0%	0.2%	0.0%	0.0%	0.0%	17.0%	0.0%	3.6%	0.0%	0.9%	0.0%	0.7%	1.6%	38.8%
2002	11280	2,3,4,5	22.8%	0.0%	1.5%	12.6%	2.2%	15.0%	1.4%	0.0%	0.1%	0.0%	0.0%	0.0%	8.7%	0.0%	3.5%	0.0%	0.0%	0.0%	1.0%	2.2%	28.9%
2003	7902	2,3,4,5	27.5%	0.7%	1.1%	11.8%	2.5%	11.7%	0.3%	0.0%	0.1%	0.0%	0.0%	0.0%	6.7%	0.0%	1.0%	0.0%	0.1%	0.0%	2.7%	5.6%	28.3%
2004	4873	2,3,4,5	14.3%	0.4%	1.1%	5.4%	1.9%	12.3%	1.4%	0.0%	0.2%	0.0%	0.0%	0.0%	10.7%	0.0%	1.5%	0.0%	0.3%	0.0%	7.4%	14.3%	28.5%
2005	10058	2,3,4,5	9.1%	0.0%	0.6%	6.0%	2.8%	10.3%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	6.3%	0.0%	0.5%	0.0%	0.0%	0.0%	6.8%	7.6%	49.1%
2006	3774	2,3,4,5	11.9%	0.1%	0.5%	3.7%	1.3%	11.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	0.0%	0.4%	0.2%	0.1%	0.0%	13.1%	9.9%	43.5%
2007	4951	2,3,4,5	10.0%	1.2%	1.0%	1.3%	2.1%	5.9%	1.2%	0.0%	0.1%	0.0%	0.0%	0.0%	3.7%	0.0%	0.4%	0.0%	0.1%	0.0%	9.1%	13.1%	50.8%
2008	1572	2,3,4,5	7.6%	0.5%	0.4%	1.1%	0.3%	4.3%	3.9%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	0.3%	0.0%	0.2%	0.0%	22.1%	9.9%	47.3%
2009	1055	2,3,4,5	8.1%	0.4%	0.2%	1.4%	0.2%	10.7%	11.6%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	0.0%	0.3%	0.0%	0.0%	0.0%	9.2%	5.5%	50.0%
2010	1550	2,3,4,5	9.4%	0.0%	0.5%	1.9%	4.5%	2.3%	0.8%	0.0%	2.1%	0.0%	0.0%	0.0%	4.6%	0.0%	0.8%	0.0%	0.0%	0.0%	19.8%	7.9%	45.4%
1979-2010	2510		13.6%	0.6%	0.9%	4.1%	2.0%	9.7%	1.8%	0.1%	0.5%	0.6%	1.6%	0.0%	5.8%	0.0%	1.1%	0.1%	0.2%	0.0%	6.6%	3.4%	47.4%
1979-1984	268		24.1%	0.0%	1.0%	8.6%	0.8%	17.6%	0.0%	1.3%	2.3%	3.8%	5.7%	0.0%	1.1%	0.0%	2.0%	0.0%	0.0%	0.0%	2.3%	0.0%	29.4%
1985-1995	373		9.8%	0.8%	0.1%	4.3%	2.3%	12.3%	1.0%	0.0%	0.3%	0.9%	2.9%	0.0%	7.0%	0.0%	1.0%	0.3%	0.2%	0.0%	7.1%	0.4%	49.3%
1996-1998	1083		13.7%	0.5%	1.7%	0.9%	1.6%	1.6%	0.2%	0.0%	0.9%	0.0%	1.1%	0.0%	2.5%	0.0%	0.2%	0.0%	0.5%	0.0%	3.1%	1.1%	70.6%
1999-2010	4842		14.6%	0.7%	1.2%	3.9%	2.1%	8.4%	3.0%	0.0%	0.3%	0.0%	0.1%	0.0%	6.5%	0.0%	1.2%	0.0%	0.2%	0.0%	7.8%	6.9%	43.1%

Appendix C.85. Percent distribution of Taku River reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM														Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal				
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	210	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	297	3,4,5	3.0%	3.0%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	90.6%
1981	446	3,4,5,6	5.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	94.8%
1982	262	3,4,5,6	6.1%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	91.2%
1983	169	3,4,5,6	2.4%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	96.4%
1984	353	3,4,5,6	9.6%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	88.4%
1985	342	4,5,6	2.9%	0.0%	8.2%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	88.0%
1986	163	5,6	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	50	6	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	63	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	168	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	376	3,4,5	1.9%	1.1%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	95.2%
1997	633	3,4,5,6	0.5%	1.9%	8.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	88.9%
1998	388	3,4,5,6	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	99.2%
1999	594	3,4,5,6	1.3%	2.2%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	94.1%
2000	1101	3,4,5,6	1.9%	0.7%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	95.4%
2001	981	3,4,5,6	3.4%	2.2%	3.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	91.3%
2002	902	3,4,5,6	2.7%	2.1%	5.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	89.8%
2003	893	3,4,5,6	1.6%	1.5%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	95.9%
2004	2137	3,4,5,6	2.8%	4.1%	2.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	90.3%
2005	1210	3,4,5,6	3.6%	29.1%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	64.0%
2006	880	3,4,5,6	3.4%	16.3%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	77.4%
2007	365	3,4,5,6	6.6%	5.2%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	87.1%
2008	621	3,4,5,6	4.7%	4.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	90.8%
2009	281	3,4,5,6	7.1%	11.0%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	79.0%
2010	173	4,5,6	4.0%	1.7%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	92.5%
1979-2010	638		3.6%	4.4%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	89.5%
1979-1984	305		5.3%	1.8%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	92.3%
1985-1995	342		2.9%	0.0%	8.2%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	88.0%
1996-1998	466		1.0%	1.0%	3.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	94.5%
1999-2010	845		3.6%	6.7%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	87.3%

Appendix C.86. Percent distribution of Taku River total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	217	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	300	3,4,5	3.7%	3.0%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	89.7%
1981	446	3,4,5,6	5.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	94.8%
1982	266	3,4,5,6	7.1%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	89.8%
1983	171	3,4,5,6	2.9%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	95.3%
1984	356	3,4,5,6	10.4%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	87.6%
1985	343	4,5,6	2.9%	0.0%	8.5%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	87.8%
1986	165	5,6	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	50	6	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	70	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	194	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	384	3,4,5	1.8%	2.3%	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	93.2%
1997	651	3,4,5,6	0.5%	3.2%	9.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	86.5%
1998	390	3,4,5,6	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	98.7%
1999	635	3,4,5,6	1.9%	6.1%	3.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	88.0%
2000	1113	3,4,5,6	2.2%	1.2%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	94.3%
2001	1003	3,4,5,6	3.7%	3.6%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	89.3%
2002	933	3,4,5,6	3.1%	2.9%	7.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	86.8%
2003	914	3,4,5,6	2.1%	2.6%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	93.7%
2004	2212	3,4,5,6	3.2%	6.5%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	87.2%
2005	1292	3,4,5,6	3.6%	33.1%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	59.9%
2006	908	3,4,5,6	3.6%	18.1%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	75.0%
2007	403	3,4,5,6	7.4%	12.4%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	78.9%
2008	629	3,4,5,6	4.9%	5.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	89.7%
2009	290	3,4,5,6	7.2%	13.1%	3.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	76.6%
2010	176	4,5,6	4.0%	2.3%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	90.9%
1979-2010	658		3.9%	5.8%	2.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	87.3%
1979-1984	308		5.9%	1.9%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	91.5%
1985-1995	343		2.9%	0.0%	8.5%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	87.8%
1996-1998	475		1.2%	1.9%	4.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	92.8%
1999-2010	876		3.9%	8.9%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	84.2%

Appendix C.87. Percent distribution of Unuk River reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	24	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	604	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	418	3,4,5	9.1%	0.2%	2.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	87.1%
1988	436	3,4,5,6	6.0%	0.5%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	92.4%
1989	256	3,4,5,6	7.0%	0.8%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	90.6%
1990	157	4,5,6	21.7%	0.0%	10.2%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	65.6%
1991	129	5,6	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	143	6	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	1	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	21	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	122	3,4,5	9.8%	5.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	84.4%
1998	339	3,4,5,6	10.3%	1.8%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	84.7%
1999	458	3,4,5,6	8.5%	0.9%	13.5%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	74.7%
2000	604	3,4,5,6	15.2%	2.6%	13.6%	0.0%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	64.1%
2001	699	3,4,5,6	14.0%	1.0%	10.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	73.7%
2002	408	3,4,5,6	16.9%	0.7%	12.0%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	67.9%
2003	284	3,4,5,6	24.3%	0.4%	15.8%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	55.6%
2004	292	3,4,5,6	13.4%	21.2%	7.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	57.5%
2005	371	3,4,5,6	34.8%	3.8%	17.8%	0.5%	3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	39.4%
2006	360	3,4,5,6	20.8%	11.4%	12.5%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	53.6%
2007	302	3,4,5,6	32.1%	6.6%	6.6%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	52.6%
2008	172	3,4,5,6	26.7%	7.0%	1.7%	0.0%	4.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	59.9%
2009	231	3,4,5,6	19.0%	1.7%	8.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	71.0%
2010	341	3,4,5,6	21.7%	0.9%	7.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	69.5%
1979-2010	347		17.3%	3.7%	8.0%	0.7%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	69.1%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	317		10.9%	0.4%	3.6%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	83.9%
1996-1998	230		10.1%	3.8%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	84.5%
1999-2010	377		20.6%	4.9%	10.6%	0.8%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	61.6%

Appendix C.88. Percent distribution of Unuk River total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	44	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	645	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	430	3,4,5	11.2%	0.5%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	84.7%
1988	443	3,4,5,6	6.8%	1.1%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	91.0%
1989	266	3,4,5,6	8.6%	2.3%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	87.2%
1990	179	4,5,6	27.9%	0.6%	11.7%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	57.5%
1991	138	5,6	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	144	6	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	2	3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	32	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	146	3,4,5	13.7%	10.3%	5.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	70.5%
1998	362	3,4,5,6	12.4%	3.9%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	79.3%
1999	516	3,4,5,6	11.2%	1.6%	17.6%	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	66.3%
2000	667	3,4,5,6	17.2%	4.8%	14.5%	0.0%	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	58.0%
2001	727	3,4,5,6	15.0%	1.4%	11.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	70.8%
2002	430	3,4,5,6	18.4%	1.4%	13.3%	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	64.4%
2003	316	3,4,5,6	26.6%	0.3%	19.0%	3.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%
2004	370	3,4,5,6	13.8%	32.7%	8.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	45.4%
2005	415	3,4,5,6	35.7%	4.3%	19.3%	0.5%	5.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	35.2%
2006	401	3,4,5,6	22.2%	14.7%	13.5%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	48.1%
2007	342	3,4,5,6	31.3%	12.6%	6.7%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	46.5%
2008	190	3,4,5,6	30.0%	7.9%	2.1%	0.0%	5.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	54.2%
2009	255	3,4,5,6	22.4%	2.7%	10.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	64.3%
2010	362	3,4,5,6	24.3%	1.7%	7.7%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	65.5%
1979-2010	379		19.4%	5.8%	9.4%	0.7%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	63.3%
1979-1984	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985-1995	330		13.6%	1.1%	4.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	80.1%
1996-1998	254		13.1%	7.1%	4.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	74.9%
1999-2010	416		22.3%	7.2%	12.0%	0.8%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	55.7%

Appendix C.89. Percent distribution of Columbia River Upriver Bright (Columbia River Upriver Brights) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	5346	2,3,4	17.8%	0.3%	0.6%	7.5%	0.1%	12.5%	0.0%	0.4%	0.1%	4.0%	4.4%	0.0%	1.3%	0.1%	1.1%	0.1%	0.2%	0.0%	22.8%	0.5%	26.4%
1980	3572	2,3,4,5	19.8%	0.8%	0.5%	6.4%	0.1%	7.3%	0.0%	0.4%	0.6%	1.6%	1.9%	0.0%	1.1%	0.0%	0.8%	0.0%	0.4%	0.0%	6.3%	0.7%	51.3%
1981	2273	2,3,4,5	16.0%	0.2%	0.4%	5.5%	0.0%	3.8%	0.2%	0.2%	0.2%	1.1%	1.8%	0.0%	0.5%	0.0%	0.8%	0.0%	0.2%	0.0%	3.6%	0.0%	65.6%
1982	1360	2,3,4,5	6.4%	0.5%	0.2%	3.4%	0.1%	4.6%	0.0%	0.0%	0.0%	0.2%	1.5%	0.0%	0.6%	0.0%	0.7%	0.0%	0.0%	0.0%	2.5%	0.0%	79.2%
1983	844	2,3,4,5	15.6%	0.2%	0.0%	10.2%	0.2%	3.7%	0.0%	0.0%	0.2%	1.8%	3.6%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	8.2%	0.0%	55.9%
1984	1842	2,3,4,5	14.5%	1.0%	0.1%	8.9%	0.2%	7.2%	0.2%	0.0%	0.2%	2.0%	2.2%	0.0%	0.2%	0.0%	0.0%	0.0%	0.6%	0.0%	15.4%	1.2%	46.1%
1985	3522	2,3,4,5	8.7%	1.3%	0.2%	8.2%	0.0%	7.5%	0.1%	0.0%	0.1%	0.8%	2.6%	0.0%	0.4%	0.0%	0.5%	0.1%	0.4%	0.0%	31.5%	3.6%	34.0%
1986	5263	2,3,4,5	9.7%	0.7%	0.1%	7.8%	0.1%	7.0%	0.1%	0.0%	0.1%	1.7%	1.4%	0.0%	0.8%	0.0%	0.2%	0.0%	0.4%	0.0%	33.8%	1.8%	34.5%
1987	4160	2,3,4,5	15.0%	0.7%	0.3%	11.8%	0.1%	7.0%	0.4%	0.0%	0.0%	1.7%	0.8%	0.0%	1.2%	0.0%	0.4%	0.0%	0.5%	0.0%	35.8%	2.8%	21.5%
1988	2804	2,3,4,5	9.9%	0.7%	0.4%	8.1%	0.0%	10.6%	0.0%	0.0%	0.0%	0.5%	0.6%	0.0%	1.9%	0.0%	0.5%	0.1%	0.1%	0.0%	45.0%	2.3%	19.1%
1989	1231	2,3,4,5	11.9%	0.0%	0.2%	14.9%	0.6%	7.7%	0.0%	0.0%	0.0%	0.2%	1.5%	0.0%	1.2%	0.0%	0.3%	0.0%	0.0%	0.0%	42.5%	1.6%	17.3%
1990	678	2,3,4,5	13.6%	0.0%	1.0%	9.9%	0.0%	8.1%	0.0%	0.0%	0.0%	0.7%	0.7%	0.0%	1.2%	0.0%	0.4%	0.0%	0.7%	0.0%	33.8%	1.2%	28.6%
1991	269	2,3,4,5	6.3%	0.7%	2.6%	5.9%	0.0%	8.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	19.7%	4.1%	50.9%
1992	303	2,3,4,5	3.0%	0.3%	0.0%	3.0%	0.0%	10.6%	1.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	17.2%	5.9%	55.4%
1993	525	2,3,4,5	10.9%	0.0%	0.0%	6.7%	0.6%	17.5%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	1.7%	0.0%	1.3%	0.0%	0.8%	0.0%	15.6%	4.4%	40.2%
1994	935	2,3,4,5	9.3%	0.9%	0.0%	7.6%	1.2%	6.5%	0.6%	0.0%	0.0%	0.2%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	19.3%	3.3%	50.3%
1995	694	2,3,4,5	8.1%	0.1%	1.7%	2.0%	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.7%	0.0%	0.7%	0.0%	0.0%	0.0%	9.9%	3.6%	67.3%
1996	762	2,3,4,5	2.9%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.8%	0.0%	0.0%	0.0%	0.3%	0.0%	22.4%	5.1%	68.0%
1997	981	2,3,4,5	11.1%	0.5%	2.5%	4.6%	0.7%	0.6%	0.1%	0.0%	0.0%	0.2%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.8%	10.1%	47.7%
1998	704	2,3,4,5	8.5%	1.7%	2.3%	2.7%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.9%	8.7%	60.8%
1999	1336	2,3,4,5	10.8%	0.0%	2.5%	7.3%	0.7%	0.0%	0.4%	0.0%	0.4%	0.0%	0.0%	0.0%	0.5%	0.0%	0.1%	0.0%	0.0%	0.0%	13.9%	8.1%	55.2%
2000	890	2,3,4,5	19.3%	0.1%	2.2%	0.0%	0.0%	1.3%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.2%	0.0%	0.0%	0.0%	20.7%	5.4%	47.5%
2001	1704	2,3,4,5	3.9%	0.0%	0.7%	0.0%	0.4%	0.7%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	0.0%	0.5%	0.0%	0.0%	0.0%	13.6%	7.7%	70.3%
2002	2196	2,3,4,5	14.3%	0.0%	2.3%	1.4%	0.6%	1.4%	0.5%	0.0%	0.4%	0.0%	0.1%	0.0%	1.7%	0.0%	1.0%	0.0%	0.0%	0.0%	18.3%	7.4%	50.6%
2003	2334	2,3,4,5	13.5%	0.9%	0.6%	4.7%	0.9%	0.7%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.6%	0.0%	0.0%	0.0%	15.1%	6.8%	55.2%
2004	2338	2,3,4,5	8.9%	1.1%	0.4%	3.3%	1.4%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	1.5%	0.0%	0.1%	0.0%	16.0%	6.2%	58.0%
2005	2488	2,3,4,5	13.9%	0.9%	0.9%	8.9%	4.5%	3.5%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	1.2%	0.0%	0.0%	0.0%	13.9%	7.0%	42.4%
2006	1636	2,3,4,5	13.0%	1.5%	1.3%	6.7%	1.7%	1.6%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	0.0%	0.4%	0.0%	0.2%	0.0%	13.4%	15.2%	41.7%
2007	551	2,3,4,5	10.5%	0.2%	0.7%	5.6%	4.7%	1.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	1.3%	0.0%	0.0%	0.0%	12.2%	18.1%	44.6%
2008	800	2,3,4,5	8.6%	0.3%	0.0%	2.3%	1.9%	2.0%	3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.9%	0.0%	0.0%	0.0%	19.6%	8.3%	51.4%
2009	1172	2,3,4,5	17.1%	1.8%	1.3%	8.1%	1.2%	0.5%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	1.1%	0.0%	0.7%	0.0%	22.3%	6.5%	37.5%
2010	1745	2,3,4,5	3.3%	0.3%	1.7%	1.2%	1.0%	0.9%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	0.0%	2.1%	0.0%	0.0%	0.0%	18.6%	4.6%	63.2%
1979-2010	1789		11.1%	0.6%	0.9%	5.8%	0.7%	4.8%	0.6%	0.0%	0.1%	0.5%	0.9%	0.0%	0.9%	0.0%	0.6%	0.0%	0.2%	0.0%	19.3%	5.1%	48.1%
1979-1984	2540		15.0%	0.5%	0.3%	7.0%	0.1%	6.5%	0.1%	0.2%	0.2%	1.8%	2.6%	0.0%	0.7%	0.0%	0.6%	0.0%	0.2%	0.0%	9.8%	0.4%	54.1%
1985-1995	1853		9.7%	0.5%	0.6%	7.8%	0.2%	8.8%	0.2%	0.0%	0.0%	0.5%	1.1%	0.0%	0.9%	0.0%	0.5%	0.0%	0.3%	0.0%	27.6%	3.1%	38.1%
1996-1998	816		7.5%	0.7%	1.6%	2.4%	0.4%	0.3%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.6%	0.0%	0.0%	0.0%	0.1%	0.0%	19.4%	8.0%	58.8%
1999-2010	1599		11.4%	0.6%	1.2%	4.1%	1.6%	1.3%	1.3%	0.0%	0.1%	0.0%	0.0%	0.0%	1.0%	0.0%	0.9%	0.0%	0.1%	0.0%	16.5%	8.5%	51.5%

Appendix C.90. Percent distribution of Columbia River Upriver Bright (Columbia River Upriver Brights) total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			Esc.
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	5547	2,3,4	18.4%	0.3%	0.6%	7.7%	0.1%	12.9%	0.0%	0.4%	0.1%	4.0%	4.4%	0.0%	1.3%	0.1%	1.2%	0.1%	0.3%	0.0%	22.4%	0.5%	25.4%
1980	3704	2,3,4,5	20.9%	0.8%	0.6%	6.7%	0.1%	7.5%	0.0%	0.5%	0.6%	1.6%	1.9%	0.0%	1.1%	0.0%	0.8%	0.0%	0.4%	0.0%	6.3%	0.7%	49.5%
1981	2335	2,3,4,5	17.1%	0.2%	0.4%	5.7%	0.0%	4.0%	0.2%	0.2%	0.2%	1.1%	1.8%	0.0%	0.6%	0.0%	0.9%	0.0%	0.2%	0.0%	3.6%	0.0%	63.9%
1982	1437	2,3,4,5	9.0%	0.5%	0.3%	4.0%	0.2%	5.2%	0.0%	0.0%	0.0%	0.3%	1.6%	0.0%	0.8%	0.0%	0.7%	0.0%	0.0%	0.0%	2.6%	0.0%	74.9%
1983	972	2,3,4,5	22.3%	0.3%	0.0%	11.1%	0.2%	3.9%	0.0%	0.0%	0.2%	2.0%	3.4%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	7.6%	0.0%	48.6%
1984	2170	2,3,4,5	18.9%	0.9%	0.2%	9.7%	0.2%	7.8%	0.2%	0.0%	0.2%	2.2%	2.2%	0.0%	0.2%	0.0%	0.0%	0.0%	1.0%	0.0%	16.1%	1.1%	39.2%
1985	4068	2,3,4,5	12.0%	2.4%	0.3%	8.3%	0.0%	7.6%	0.1%	0.0%	0.0%	0.8%	2.4%	0.0%	0.4%	0.0%	0.5%	0.0%	0.5%	0.0%	31.8%	3.2%	29.4%
1986	5780	2,3,4,5	11.2%	1.4%	0.1%	7.9%	0.1%	7.3%	0.1%	0.0%	0.1%	1.7%	1.3%	0.0%	0.8%	0.0%	0.2%	0.1%	0.5%	0.0%	34.2%	1.7%	31.4%
1987	4705	2,3,4,5	19.3%	1.3%	0.3%	12.3%	0.1%	7.6%	0.4%	0.0%	0.0%	1.8%	0.7%	0.0%	1.2%	0.1%	0.4%	0.0%	0.5%	0.0%	32.7%	2.5%	19.0%
1988	3038	2,3,4,5	11.0%	1.6%	0.4%	8.5%	0.0%	11.5%	0.0%	0.0%	0.0%	0.6%	0.6%	0.0%	1.9%	0.0%	0.6%	0.1%	0.2%	0.0%	43.2%	2.2%	17.6%
1989	1321	2,3,4,5	14.2%	0.0%	0.2%	15.2%	0.5%	8.1%	0.0%	0.0%	0.0%	0.2%	1.4%	0.0%	1.2%	0.0%	0.3%	0.0%	0.0%	0.0%	40.9%	1.6%	16.1%
1990	710	2,3,4,5	14.1%	0.0%	1.1%	10.6%	0.0%	8.7%	0.0%	0.0%	0.0%	0.7%	0.7%	0.0%	1.3%	0.0%	0.4%	0.0%	0.8%	0.0%	33.1%	1.1%	27.3%
1991	303	2,3,4,5	7.9%	2.3%	3.3%	6.3%	0.0%	9.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.1%	4.0%	45.2%
1992	334	2,3,4,5	3.6%	1.5%	0.0%	3.6%	0.0%	12.3%	1.2%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	18.0%	6.0%	50.3%
1993	604	2,3,4,5	15.6%	0.0%	0.0%	7.5%	0.5%	19.4%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	1.7%	0.0%	1.2%	0.0%	0.7%	0.0%	14.2%	4.1%	34.9%
1994	1000	2,3,4,5	10.8%	2.5%	0.0%	7.9%	1.2%	7.0%	0.6%	0.0%	0.0%	0.2%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	18.6%	3.3%	47.0%
1995	751	2,3,4,5	10.1%	0.4%	2.4%	2.4%	0.0%	6.5%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.7%	0.0%	0.8%	0.0%	0.0%	0.0%	10.4%	3.6%	62.2%
1996	807	2,3,4,5	4.5%	0.0%	0.0%	1.4%	0.2%	0.7%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.7%	0.0%	0.0%	0.0%	0.4%	0.0%	22.4%	5.2%	64.2%
1997	1044	2,3,4,5	12.7%	0.7%	3.3%	5.0%	1.1%	0.7%	0.1%	0.0%	0.0%	0.2%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.4%	10.1%	44.8%
1998	772	2,3,4,5	10.5%	4.1%	2.8%	3.1%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.8%	8.7%	55.4%
1999	1430	2,3,4,5	14.2%	0.0%	2.7%	7.7%	0.8%	0.0%	0.3%	0.0%	0.5%	0.0%	0.0%	0.0%	0.6%	0.0%	0.1%	0.0%	0.0%	0.0%	13.5%	8.0%	51.6%
2000	1016	2,3,4,5	25.7%	0.1%	3.2%	0.0%	0.0%	1.5%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.2%	0.0%	0.0%	0.0%	18.9%	5.0%	41.6%
2001	1793	2,3,4,5	5.4%	0.0%	1.1%	0.0%	0.6%	0.8%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	0.5%	0.0%	0.0%	0.0%	14.3%	8.1%	66.8%
2002	2355	2,3,4,5	16.3%	0.0%	2.5%	1.6%	0.7%	1.4%	0.6%	0.0%	0.5%	0.0%	1.1%	0.0%	1.9%	0.0%	1.0%	0.0%	0.0%	0.0%	17.8%	7.4%	47.2%
2003	2467	2,3,4,5	15.2%	1.1%	0.6%	5.2%	1.3%	0.7%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.6%	0.0%	0.0%	0.0%	14.8%	6.8%	52.2%
2004	2513	2,3,4,5	11.0%	1.9%	0.5%	3.8%	2.0%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	1.5%	0.0%	0.2%	0.0%	15.8%	6.3%	54.0%
2005	2646	2,3,4,5	14.8%	1.1%	0.9%	9.4%	5.6%	3.4%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	1.3%	0.0%	0.0%	0.0%	13.5%	7.0%	39.8%
2006	1712	2,3,4,5	14.0%	1.8%	1.4%	6.9%	2.0%	1.5%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.4%	0.0%	0.3%	0.0%	13.1%	15.3%	39.8%
2007	636	2,3,4,5	10.7%	0.3%	1.1%	5.2%	6.1%	1.1%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	1.4%	0.0%	0.0%	0.0%	13.5%	20.9%	38.7%
2008	888	2,3,4,5	13.2%	0.6%	0.0%	2.9%	1.9%	1.9%	3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.8%	0.0%	0.0%	0.0%	19.0%	8.2%	46.3%
2009	1452	2,3,4,5	20.6%	1.8%	1.8%	8.6%	1.9%	0.6%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	1.0%	0.0%	1.2%	0.0%	24.1%	6.1%	30.2%
2010	1889	2,3,4,5	4.7%	0.4%	2.5%	1.5%	1.3%	0.8%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	0.0%	2.1%	0.0%	0.0%	0.0%	19.7%	4.9%	58.4%
1979-2010	1944		13.4%	0.9%	1.1%	6.2%	0.9%	5.1%	0.6%	0.0%	0.1%	0.5%	0.9%	0.0%	0.9%	0.0%	0.6%	0.0%	0.2%	0.0%	19.1%	5.1%	44.2%
1979-1984	2694		17.8%	0.5%	0.3%	7.5%	0.1%	6.9%	0.1%	0.2%	0.2%	1.9%	2.5%	0.0%	0.7%	0.0%	0.6%	0.0%	0.3%	0.0%	9.8%	0.4%	50.2%
1985-1995	2056		11.8%	1.2%	0.7%	8.2%	0.2%	9.6%	0.2%	0.0%	0.0%	0.5%	1.1%	0.0%	0.9%	0.0%	0.4%	0.0%	0.3%	0.0%	27.0%	3.0%	34.6%
1996-1998	874		9.2%	1.6%	2.0%	3.2%	0.6%	0.5%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.6%	0.0%	0.0%	0.0%	0.1%	0.0%	19.2%	8.0%	54.8%
1999-2010	1733		13.8%	0.8%	1.5%	4.4%	2.0%	1.3%	1.4%	0.0%	0.1%	0.0%	0.1%	0.0%	1.1%	0.0%	0.9%	0.0%	0.1%	0.0%	16.5%	8.7%	47.2%

Appendix C.91. Percent distribution of University Of Washington Accelerated reported catch among fisheries and escapement.

	Estimated		AABM							ISBM													
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	3752	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	15.0%	0.1%	1.7%	4.4%	0.3%	4.1%	0.0%	1.8%	0.0%	0.5%	6.6%	38.2%	0.0%	0.0%	0.0%	27.4%
1980	4308	2,3,4,5	0.0%	0.0%	0.0%	0.1%	0.0%	7.1%	0.1%	0.3%	5.0%	0.2%	1.4%	0.0%	1.3%	0.0%	0.0%	12.8%	49.0%	0.0%	0.0%	0.2%	22.3%
1981	3460	2,3,4,5	0.0%	0.0%	0.0%	0.6%	0.0%	10.2%	0.1%	0.6%	4.9%	0.0%	4.0%	0.0%	2.3%	0.0%	0.3%	11.7%	45.5%	0.0%	0.0%	0.0%	19.9%
1982	3299	2,3,4,5	0.0%	0.1%	0.0%	0.0%	0.0%	16.0%	0.2%	0.3%	3.8%	0.3%	0.9%	0.0%	2.3%	0.0%	0.4%	12.8%	29.4%	0.0%	1.2%	0.0%	32.3%
1983	2887	2,3,4,5	0.0%	0.0%	0.0%	0.1%	0.0%	10.6%	0.1%	0.7%	3.1%	1.0%	1.7%	0.0%	1.3%	0.0%	0.2%	19.2%	30.3%	0.0%	4.6%	0.0%	27.2%
1984	1700	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	19.2%	0.2%	0.5%	4.4%	0.5%	1.0%	0.0%	1.9%	0.0%	0.0%	20.0%	23.8%	0.0%	3.5%	0.0%	25.0%
1985	744	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	14.4%	1.3%	0.0%	5.0%	0.0%	5.4%	0.0%	2.2%	0.0%	0.0%	6.3%	23.1%	0.0%	9.4%	0.0%	32.9%
1986	757	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	18.4%	0.9%	0.0%	3.8%	0.0%	8.3%	0.0%	1.5%	0.0%	0.0%	20.7%	18.5%	0.0%	5.7%	0.0%	22.2%
1987	953	3,4,5	0.3%	0.0%	0.0%	0.0%	0.0%	9.8%	1.5%	1.4%	4.7%	0.3%	0.3%	0.0%	4.1%	0.0%	0.2%	23.1%	13.9%	0.0%	25.8%	0.0%	14.7%
1988	594	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	43	5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1998	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1999	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2000	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1979-2010	2429		0.0%	0.0%	0.0%	0.1%	0.0%	13.4%	0.5%	0.6%	4.3%	0.3%	3.0%	0.0%	2.1%	0.0%	0.2%	14.8%	30.2%	0.0%	5.6%	0.0%	24.9%
1979-1984	3234		0.0%	0.0%	0.0%	0.1%	0.0%	13.0%	0.2%	0.7%	4.3%	0.4%	2.2%	0.0%	1.8%	0.0%	0.2%	13.8%	36.0%	0.0%	1.6%	0.0%	25.7%
1985-1995	818		0.1%	0.0%	0.0%	0.0%	0.0%	14.2%	1.2%	0.5%	4.5%	0.1%	4.7%	0.0%	2.6%	0.0%	0.1%	16.7%	18.5%	0.0%	13.6%	0.0%	23.3%
1996-1998	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1999-2010	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Appendix C.92. Percent distribution of University Of Washington Accelerated total fishing mortalities among fisheries and escapement.

	Estimated		AABM							ISBM													
Catch	# of	Ages	SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
Year	CWTs	Present	Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	Esc.
1979	4319	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	15.3%	0.1%	1.6%	4.1%	0.3%	3.7%	0.0%	1.8%	0.0%	0.5%	7.0%	41.8%	0.0%	0.0%	0.0%	23.8%
1980	5908	2,3,4,5	0.0%	0.0%	0.0%	0.1%	0.0%	8.4%	0.1%	0.3%	3.9%	0.2%	1.2%	0.0%	1.5%	0.0%	0.0%	13.0%	54.9%	0.0%	0.0%	0.2%	16.3%
1981	4320	2,3,4,5	0.0%	0.0%	0.0%	0.6%	0.0%	10.7%	0.1%	0.5%	4.3%	0.0%	3.5%	0.0%	2.2%	0.0%	0.3%	11.1%	50.8%	0.0%	0.0%	0.0%	15.9%
1982	3882	2,3,4,5	0.0%	0.1%	0.0%	0.0%	0.0%	18.9%	0.2%	0.3%	3.5%	0.3%	0.8%	0.0%	2.6%	0.0%	0.4%	13.0%	31.5%	0.0%	1.1%	0.0%	27.4%
1983	3842	2,3,4,5	0.0%	0.0%	0.0%	0.1%	0.0%	9.8%	0.1%	0.7%	2.5%	0.9%	1.4%	0.0%	1.2%	0.0%	0.2%	20.7%	38.4%	0.0%	3.7%	0.0%	20.4%
1984	2023	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	18.2%	0.2%	0.4%	4.0%	0.5%	1.0%	0.0%	1.8%	0.0%	0.0%	20.2%	29.6%	0.0%	3.1%	0.0%	21.0%
1985	870	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	14.1%	1.3%	0.0%	4.6%	0.0%	5.1%	0.0%	2.1%	0.0%	0.0%	6.7%	29.4%	0.0%	8.6%	0.0%	28.2%
1986	934	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	19.0%	0.9%	0.0%	3.4%	0.0%	7.5%	0.0%	1.6%	0.0%	0.0%	20.8%	23.9%	0.0%	5.0%	0.0%	18.0%
1987	1038	3,4,5	0.5%	0.0%	0.0%	0.1%	0.0%	11.3%	1.4%	1.3%	4.6%	0.4%	0.3%	0.0%	4.4%	0.0%	0.2%	22.3%	14.8%	0.0%	24.9%	0.0%	13.5%
1988	617	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	44	5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1998	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1999	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2000	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1979-2010	3015		0.1%	0.0%	0.0%	0.1%	0.0%	14.0%	0.5%	0.6%	3.9%	0.3%	2.7%	0.0%	2.1%	0.0%	0.2%	15.0%	35.0%	0.0%	5.2%	0.0%	20.5%
1979-1984	4049		0.0%	0.0%	0.0%	0.1%	0.0%	13.5%	0.1%	0.6%	3.7%	0.4%	1.9%	0.0%	1.8%	0.0%	0.2%	14.2%	41.2%	0.0%	1.3%	0.0%	20.8%
1985-1995	947		0.2%	0.0%	0.0%	0.0%	0.0%	14.8%	1.2%	0.4%	4.2%	0.1%	4.3%	0.0%	2.7%	0.0%	0.1%	16.6%	22.7%	0.0%	12.8%	0.0%	19.9%
1996-1998	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1999-2010	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Appendix C.93. Percent distribution of White River Spring Yearling (Puget Sound Hatchery Yearling) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	1	2,5	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	82	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	67.1%	23.2%	0.0%	6.1%	0.0%	1.2%
1983	186	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	1.6%	0.0%	0.0%	11.3%	59.7%	0.0%	0.0%	0.0%	21.5%
1984	155	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.5%	0.0%	5.2%	0.0%	5.8%	0.0%	0.0%	2.6%	0.0%	0.0%	3.9%	25.2%	0.0%	5.2%	0.0%	47.7%
1985	312	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	0.0%	0.0%	0.0%	2.9%	0.0%	0.0%	0.0%	0.0%	30.8%	50.6%	0.0%	0.0%	0.0%	13.5%
1986	844	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	2.4%	0.4%	2.0%	0.0%	0.4%	0.0%	0.0%	15.3%	52.3%	0.0%	0.0%	0.0%	26.8%
1987	464	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	0.0%	0.4%	0.0%	3.2%	0.0%	0.0%	13.6%	41.2%	0.0%	0.0%	0.0%	40.1%
1988	1606	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.8%	0.0%	2.5%	0.0%	0.2%	0.0%	1.3%	0.0%	0.2%	13.0%	48.3%	0.0%	0.0%	0.0%	33.6%
1989	895	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	1.2%	0.0%	1.0%	0.0%	6.0%	0.0%	0.2%	13.3%	40.9%	0.0%	0.3%	0.0%	35.8%
1990	441	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	0.0%	0.5%	0.0%	0.7%	0.0%	5.4%	0.0%	0.0%	15.6%	42.0%	0.0%	0.5%	0.0%	33.3%
1991	389	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	1.5%	0.0%	1.3%	0.0%	0.0%	0.0%	4.1%	0.0%	0.0%	10.8%	38.0%	0.0%	0.0%	0.0%	43.4%
1992	778	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	0.8%	0.0%	1.9%	0.0%	2.8%	0.0%	2.4%	0.0%	0.5%	7.1%	45.0%	0.0%	0.8%	0.0%	36.2%
1993	278	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	2.9%	0.0%	0.0%	2.9%	30.6%	0.0%	0.7%	0.0%	62.2%
1994	212	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	1.4%	43.9%	0.0%	0.0%	0.0%	51.9%
1995	388	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	29.4%	0.0%	0.0%	0.0%	69.3%
1996	340	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	42.9%	0.0%	0.0%	0.0%	55.9%
1997	267	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	40.4%	0.0%	0.0%	0.0%	55.8%
1998	126	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	1.6%	27.0%	0.0%	0.0%	0.0%	69.8%
1999	82	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	30.5%	0.0%	0.0%	0.0%	64.6%
2000	86	3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	5.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	37.2%	0.0%	0.0%	0.0%	54.7%
2001	46	4,5	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	161	2	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	1038	2,3	Failed	Criteria		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	1014	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.7%	0.0%	0.1%	0.2%	9.1%	0.0%	1.7%	0.0%	84.9%
2007	866	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.5%	0.2%	17.4%	0.0%	2.2%	0.0%	78.3%
2008	231	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	5.2%	0.0%	5.6%	0.0%	86.6%
2009	202	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.9%	0.0%	2.5%	0.0%	86.6%
2010	210	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	7.6%	0.0%	89.0%
1979-2010	436		0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	0.2%	0.2%	0.8%	0.3%	0.5%	0.0%	1.4%	0.0%	0.1%	9.0%	33.0%	0.0%	1.4%	0.0%	51.8%
1979-1984	141		0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	0.0%	1.7%	0.8%	1.9%	0.5%	0.0%	1.4%	0.0%	0.0%	27.4%	36.0%	0.0%	3.8%	0.0%	23.5%
1985-1995	601		0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.5%	0.0%	1.3%	0.0%	1.0%	0.0%	2.3%	0.0%	0.1%	11.3%	42.0%	0.0%	0.2%	0.0%	40.6%
1996-1998	244		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	1.9%	36.8%	0.0%	0.0%	0.0%	60.5%
1999-2010	384		0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.4%	0.0%	0.1%	0.5%	16.0%	0.0%	2.8%	0.0%	77.8%

Appendix C.94. Percent distribution of White River Spring Yearling (Puget Sound Hatchery Yearling) total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	1	2,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	9	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	108	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	1.9%	0.9%	0.0%	0.0%	0.9%	0.0%	0.0%	54.6%	34.3%	0.0%	5.6%	0.0%	0.9%
1983	212	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.2%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	1.4%	0.0%	0.0%	10.4%	63.7%	0.0%	0.0%	0.0%	18.9%
1984	227	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%	0.0%	4.4%	0.0%	4.8%	0.0%	0.0%	1.8%	0.0%	0.0%	3.5%	44.5%	0.0%	4.4%	0.0%	32.6%
1985	438	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%	0.0%	2.5%	0.0%	0.0%	0.0%	0.0%	25.6%	60.5%	0.0%	0.0%	0.0%	9.6%
1986	960	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	2.3%	0.4%	2.0%	0.0%	0.4%	0.0%	0.0%	14.1%	56.7%	0.0%	0.0%	0.0%	23.5%
1987	733	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.4%	0.0%	2.5%	0.0%	0.0%	10.1%	60.6%	0.0%	0.0%	0.0%	25.4%
1988	1837	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.8%	0.0%	2.9%	0.0%	0.2%	0.0%	1.4%	0.0%	0.2%	12.5%	52.4%	0.0%	0.0%	0.0%	29.3%
1989	1022	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	0.0%	0.0%	1.4%	0.0%	1.0%	0.0%	6.3%	0.0%	0.2%	11.9%	46.4%	0.0%	0.3%	0.0%	31.3%
1990	518	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	0.0%	0.0%	0.6%	0.0%	0.6%	0.0%	5.8%	0.0%	0.0%	13.9%	48.3%	0.0%	0.4%	0.0%	28.4%
1991	466	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	1.5%	0.0%	1.5%	0.0%	0.0%	0.0%	4.1%	0.0%	0.0%	9.7%	46.1%	0.0%	0.0%	0.0%	36.3%
1992	862	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.7%	0.7%	0.0%	2.1%	0.0%	2.6%	0.0%	2.7%	0.0%	0.5%	6.7%	48.7%	0.0%	0.7%	0.0%	32.7%
1993	322	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	2.8%	0.0%	0.0%	2.5%	39.4%	0.0%	0.6%	0.0%	53.7%
1994	251	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	1.6%	51.4%	0.0%	0.0%	0.0%	43.8%
1995	465	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	40.4%	0.0%	0.0%	0.0%	57.8%
1996	382	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	48.7%	0.0%	0.0%	0.0%	49.7%
1997	310	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%	48.4%	0.0%	0.0%	0.0%	48.1%
1998	137	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	0.0%	0.0%	1.5%	32.8%	0.0%	0.0%	0.0%	64.2%
1999	100	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	42.0%	0.0%	0.0%	0.0%	53.0%
2000	95	3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	43.2%	0.0%	0.0%	0.0%	49.5%
2001	55	4,5	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	No Data		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	209	2	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	1071	2,3	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	1098	2,3,4	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	0.0%	0.1%	0.2%	15.7%	0.0%	1.8%	0.0%	78.4%
2007	907	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.4%	0.2%	21.1%	0.0%	2.2%	0.0%	74.8%
2008	239	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	7.9%	0.0%	5.9%	0.0%	83.7%
2009	207	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	13.0%	0.0%	2.4%	0.0%	84.5%
2010	212	2,3,4,5	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	0.0%	8.0%	0.0%	88.2%
1979-2010	504		0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	0.2%	0.2%	0.9%	0.3%	0.5%	0.0%	1.4%	0.0%	0.1%	7.8%	40.3%	0.0%	1.3%	0.0%	45.8%
1979-1984	182		0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	1.5%	0.6%	1.9%	0.5%	0.0%	1.4%	0.0%	0.0%	22.8%	47.5%	0.0%	3.3%	0.0%	17.5%
1985-1995	716		0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.4%	0.0%	1.5%	0.0%	0.9%	0.0%	2.4%	0.0%	0.1%	9.9%	50.1%	0.0%	0.2%	0.0%	33.8%
1996-1998	276		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	1.8%	43.3%	0.0%	0.0%	0.0%	54.0%
1999-2010	408		0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.4%	0.0%	0.1%	0.4%	20.7%	0.0%	2.9%	0.0%	73.2%

Appendix C.95. Percent distribution of Willamette Spring (Willamette River Hatchery) reported catch among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													Esc.
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	2097	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	5780	3,4,5	3.4%	0.7%	0.1%	5.8%	0.1%	2.7%	0.0%	0.0%	0.0%	0.1%	0.5%	0.0%	0.5%	0.0%	0.7%	0.0%	0.1%	0.0%	0.3%	7.9%	77.1%
1981	8042	3,4,5,6	4.4%	0.4%	0.1%	6.1%	0.0%	1.4%	0.0%	0.0%	0.0%	0.4%	0.1%	0.0%	0.4%	0.0%	0.2%	0.0%	0.0%	0.0%	1.5%	10.5%	74.5%
1982	3701	3,4,5,6	4.1%	1.1%	0.1%	6.5%	0.1%	4.0%	0.0%	0.0%	0.0%	0.1%	0.4%	0.0%	1.1%	0.0%	1.7%	0.1%	0.1%	0.0%	7.0%	24.7%	48.9%
1983	2478	3,4,5,6	12.5%	0.1%	0.0%	11.6%	0.0%	1.8%	0.0%	0.4%	0.3%	0.3%	0.0%	0.0%	1.8%	0.0%	0.4%	0.0%	0.4%	0.0%	6.3%	22.4%	41.5%
1984	4016	3,4,5,6	4.0%	0.2%	0.3%	2.1%	0.1%	1.9%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.9%	0.0%	0.0%	0.0%	0.2%	0.0%	6.4%	25.8%	57.8%
1985	2777	3,4,5,6	4.6%	0.1%	0.0%	0.4%	0.0%	0.5%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.3%	0.0%	0.0%	0.1%	0.0%	0.0%	16.6%	27.4%	49.8%
1986	715	3,4,5,6	2.9%	0.1%	0.0%	6.3%	0.0%	5.2%	0.6%	0.0%	0.0%	0.6%	2.4%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	8.7%	21.1%	51.5%
1987	645	3,4,5,6	9.6%	0.0%	0.6%	13.0%	0.0%	0.9%	1.2%	0.0%	0.0%	0.8%	1.1%	0.0%	2.3%	0.0%	0.0%	0.0%	0.3%	0.0%	6.0%	28.2%	35.8%
1988	1894	3,4,5,6	8.6%	0.2%	0.4%	6.2%	0.0%	3.1%	0.0%	0.0%	0.0%	0.6%	0.1%	0.0%	2.2%	0.0%	0.2%	0.0%	0.0%	0.0%	6.9%	28.6%	42.9%
1989	2636	3,4,5,6	4.4%	0.0%	0.2%	1.8%	0.0%	1.4%	0.5%	0.0%	0.5%	0.0%	0.3%	0.0%	1.5%	0.0%	0.2%	0.0%	0.1%	0.0%	12.6%	20.0%	56.6%
1990	2557	3,4,5,6	6.3%	0.3%	0.2%	1.4%	0.4%	2.1%	0.7%	0.0%	0.0%	0.2%	0.6%	0.0%	1.3%	0.0%	0.1%	0.0%	0.0%	0.0%	17.0%	27.6%	41.9%
1991	2811	3,4,5,6	3.1%	0.9%	0.6%	1.7%	0.0%	0.4%	0.2%	0.0%	0.2%	0.0%	0.2%	0.0%	0.7%	0.0%	0.2%	0.0%	0.0%	0.0%	6.0%	42.7%	43.2%
1992	2463	3,4,5,6	3.5%	1.2%	0.2%	1.7%	0.2%	2.7%	0.2%	0.0%	0.0%	0.0%	0.2%	0.0%	2.4%	0.0%	0.4%	0.0%	0.3%	0.0%	5.8%	30.7%	50.5%
1993	4792	3,4,5,6	8.1%	0.0%	0.0%	1.3%	0.1%	1.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	0.0%	0.1%	0.0%	0.0%	0.0%	0.8%	43.0%	43.5%
1994	4725	3,4,5,6	4.1%	0.3%	0.9%	0.7%	0.1%	0.7%	0.0%	0.0%	0.0%	0.2%	0.2%	0.0%	0.2%	0.0%	0.1%	0.0%	0.1%	0.0%	5.1%	38.6%	48.8%
1995	4151	3,4,5,6	2.8%	0.1%	0.3%	1.0%	0.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.3%	43.6%	50.9%
1996	3589	3,4,5,6	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.8%	33.3%	64.1%
1997	2224	3,4,5,6	3.6%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	15.8%	79.0%
1998	1538	3,4,5,6	4.3%	0.1%	0.2%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.2%	0.0%	0.4%	16.4%	78.2%
1999	1710	3,4,5,6	4.3%	0.0%	0.3%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.8%	14.6%	79.3%
2000	6269	3,4,5,6	7.8%	0.1%	0.4%	0.1%	0.5%	0.4%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.3%	0.0%	0.0%	0.0%	2.3%	29.3%	58.0%
2001	33968	3,4,5,6	1.4%	0.0%	0.1%	0.1%	0.1%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.1%	0.0%	3.5%	23.1%	70.9%
2002	19449	3,4,5,6	1.8%	0.1%	0.1%	0.9%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.2%	0.0%	0.0%	0.0%	15.8%	20.0%	59.5%
2003	6751	3,4,5,6	4.8%	0.0%	0.1%	0.4%	0.2%	2.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.1%	0.0%	0.0%	0.0%	1.5%	15.6%	74.6%
2004	6782	3,4,5,6	2.9%	0.3%	0.1%	0.6%	0.0%	5.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	6.2%	20.2%	62.4%
2005	2960	3,4,5,6	2.7%	0.0%	0.1%	0.3%	0.2%	5.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.1%	0.0%	0.1%	0.0%	5.1%	15.5%	69.7%
2006	1903	3,4,5,6	3.0%	0.0%	0.0%	0.3%	0.6%	4.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.3%	0.0%	7.9%	24.5%	58.0%
2007	1538	3,4,5,6	3.9%	0.1%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	4.7%	17.7%	71.7%
2008	2172	3,4,5,6	1.3%	0.1%	0.0%	0.4%	0.0%	1.1%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	19.4%	12.2%	65.0%
2009	3808	3,4,5,6	2.5%	0.0%	0.0%	0.2%	0.3%	0.8%	2.5%	0.0%	0.6%	0.0%	0.0%	0.0%	0.3%	0.0%	0.2%	0.0%	0.2%	0.0%	8.2%	19.4%	64.8%
2010	8078	3,4,5,6	3.0%	0.0%	0.2%	0.5%	0.3%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	0.0%	0.3%	0.0%	0.1%	0.0%	5.3%	43.1%	44.0%
1979-2010	5062		4.4%	0.2%	0.2%	2.3%	0.1%	1.7%	0.2%	0.0%	0.1%	0.1%	0.2%	0.0%	0.9%	0.0%	0.2%	0.0%	0.1%	0.0%	6.1%	24.6%	58.5%
1979-1984	4803		5.7%	0.5%	0.1%	6.4%	0.1%	2.4%	0.0%	0.1%	0.1%	0.2%	0.2%	0.0%	0.9%	0.0%	0.6%	0.0%	0.2%	0.0%	4.3%	18.3%	60.0%
1985-1995	2742		5.3%	0.3%	0.3%	3.2%	0.1%	1.7%	0.3%	0.0%	0.1%	0.2%	0.5%	0.0%	1.1%	0.0%	0.2%	0.0%	0.1%	0.0%	7.8%	32.0%	46.9%
1996-1998	2450		3.1%	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.2%	0.0%	0.0%	0.0%	0.1%	0.0%	0.7%	21.8%	73.8%
1999-2010	7949		3.3%	0.1%	0.1%	0.3%	0.2%	1.9%	0.3%	0.0%	0.1%	0.0%	0.0%	0.0%	0.7%	0.0%	0.1%	0.0%	0.1%	0.0%	6.7%	21.3%	64.8%

Appendix C.96. Percent distribution of Willamette Spring (Willamette River Hatchery) total fishing mortalities among fisheries and escapement.

Catch Year	Estimated # of CWTs	Ages Present	AABM							ISBM													
			SEAK			NBC		WCVI		Geo St		Canada			WA/OR coast			Puget Sound		Terminal			Esc.
			Troll	Net	Sport	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Net	Sport	Troll	Net	Sport	Net	Sport	Troll	Net	Sport	
1979	2296	3,4	Failed	Criteria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	6096	3,4,5	5.0%	0.8%	0.2%	7.3%	0.1%	3.2%	0.0%	0.0%	0.0%	0.2%	0.5%	0.0%	0.7%	0.0%	0.8%	0.0%	0.0%	0.0%	0.3%	7.8%	73.1%
1981	8348	3,4,5,6	5.8%	0.4%	0.1%	7.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.5%	0.1%	0.0%	0.4%	0.0%	0.3%	0.0%	0.0%	0.0%	1.6%	10.5%	71.7%
1982	3963	3,4,5,6	5.8%	1.2%	0.2%	7.5%	0.1%	4.7%	0.0%	0.0%	0.0%	0.1%	0.4%	0.0%	1.3%	0.0%	1.9%	0.2%	0.2%	0.0%	6.9%	23.9%	45.7%
1983	2862	3,4,5,6	18.8%	0.1%	0.0%	13.0%	0.0%	2.0%	0.0%	0.5%	0.3%	0.3%	0.0%	0.0%	2.1%	0.0%	0.5%	0.0%	0.7%	0.0%	5.8%	20.1%	36.0%
1984	4160	3,4,5,6	4.9%	0.2%	0.4%	2.5%	0.1%	2.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	1.1%	0.0%	0.0%	0.0%	0.2%	0.0%	6.5%	25.8%	55.8%
1985	2900	3,4,5,6	7.1%	0.2%	0.0%	0.5%	0.0%	0.5%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.3%	0.0%	0.0%	0.2%	0.0%	0.0%	16.1%	27.2%	47.7%
1986	760	3,4,5,6	4.3%	0.4%	0.0%	7.2%	0.0%	6.1%	0.7%	0.0%	0.0%	0.7%	2.5%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	8.4%	20.5%	48.4%
1987	805	3,4,5,6	18.0%	0.0%	1.0%	15.0%	0.0%	1.4%	1.2%	0.0%	0.0%	1.1%	1.0%	0.0%	3.1%	0.0%	0.0%	0.0%	0.6%	0.0%	5.3%	23.5%	28.7%
1988	2163	3,4,5,6	12.0%	0.4%	0.6%	7.7%	0.0%	3.7%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	2.5%	0.0%	0.2%	0.0%	0.0%	0.0%	6.9%	27.7%	37.5%
1989	2784	3,4,5,6	5.7%	0.0%	0.3%	2.2%	0.0%	1.7%	0.6%	0.0%	0.7%	0.0%	0.3%	0.0%	1.8%	0.0%	0.2%	0.0%	0.1%	0.0%	12.4%	20.4%	53.6%
1990	2822	3,4,5,6	10.1%	0.8%	0.3%	1.9%	0.4%	2.7%	0.7%	0.0%	0.0%	0.2%	0.6%	0.0%	1.5%	0.0%	0.1%	0.0%	0.0%	0.0%	16.0%	26.7%	38.0%
1991	3027	3,4,5,6	4.3%	2.0%	0.7%	2.1%	0.0%	0.4%	0.2%	0.0%	0.3%	0.0%	0.2%	0.0%	0.8%	0.0%	0.2%	0.0%	0.0%	0.0%	6.0%	42.7%	40.1%
1992	2879	3,4,5,6	7.1%	6.5%	0.2%	1.9%	0.2%	3.1%	0.2%	0.0%	0.0%	0.0%	0.2%	0.0%	2.7%	0.0%	0.4%	0.0%	0.6%	0.0%	5.3%	28.3%	43.2%
1993	5367	3,4,5,6	13.0%	0.0%	0.0%	1.5%	0.1%	1.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	0.0%	0.1%	0.0%	0.0%	0.0%	0.8%	42.0%	38.9%
1994	5050	3,4,5,6	5.8%	1.0%	1.1%	0.9%	0.1%	0.9%	0.0%	0.0%	0.0%	0.3%	0.2%	0.0%	0.2%	0.0%	0.1%	0.0%	0.1%	0.0%	5.0%	38.7%	45.7%
1995	4482	3,4,5,6	5.7%	0.3%	0.4%	1.3%	0.0%	0.5%	0.1%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.3%	43.6%	47.2%
1996	3728	3,4,5,6	2.4%	0.0%	0.0%	0.3%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.8%	34.4%	61.7%
1997	2275	3,4,5,6	4.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	16.4%	77.2%
1998	1592	3,4,5,6	5.8%	0.3%	0.3%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.4%	0.0%	0.4%	17.1%	75.6%
1999	1853	3,4,5,6	9.4%	0.0%	0.9%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.8%	14.6%	73.2%
2000	7121	3,4,5,6	14.2%	0.1%	1.0%	0.2%	0.8%	0.4%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.3%	0.0%	0.0%	0.0%	2.3%	28.8%	51.0%
2001	35086	3,4,5,6	1.7%	0.0%	0.1%	0.1%	0.1%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.1%	0.0%	3.8%	24.6%	68.6%
2002	19966	3,4,5,6	2.3%	0.1%	0.1%	1.1%	0.1%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.3%	0.0%	0.0%	0.0%	15.6%	20.8%	58.0%
2003	6975	3,4,5,6	6.1%	0.0%	0.1%	0.5%	0.2%	2.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.2%	0.0%	0.0%	0.0%	1.5%	16.2%	72.2%
2004	7087	3,4,5,6	3.9%	0.5%	0.1%	0.7%	0.0%	5.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	6.3%	21.0%	59.7%
2005	3045	3,4,5,6	3.3%	0.0%	0.1%	0.3%	0.3%	5.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.1%	0.0%	0.1%	0.0%	5.2%	16.2%	67.7%
2006	2009	3,4,5,6	4.3%	0.0%	0.0%	0.4%	0.8%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.3%	0.0%	7.9%	25.2%	55.0%
2007	1610	3,4,5,6	5.5%	0.3%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	4.9%	18.6%	68.4%
2008	2266	3,4,5,6	1.9%	0.1%	0.1%	0.5%	0.0%	1.2%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.1%	0.0%	0.0%	20.3%	12.9%	62.3%
2009	4101	3,4,5,6	4.0%	0.0%	0.0%	0.3%	0.4%	0.9%	3.1%	0.0%	1.3%	0.0%	0.0%	0.0%	0.4%	0.0%	0.2%	0.0%	0.5%	0.0%	8.6%	20.1%	60.2%
2010	8797	3,4,5,6	4.1%	0.0%	0.3%	0.7%	0.4%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	0.0%	0.3%	0.0%	0.2%	0.0%	5.3%	44.4%	40.4%
1979-2010	5354		6.7%	0.5%	0.3%	2.8%	0.1%	2.0%	0.3%	0.0%	0.1%	0.1%	0.2%	0.0%	1.0%	0.0%	0.2%	0.0%	0.1%	0.0%	6.1%	24.5%	54.9%
1979-1984	5086		8.0%	0.5%	0.2%	7.5%	0.1%	2.7%	0.0%	0.1%	0.1%	0.2%	0.2%	0.0%	1.1%	0.0%	0.7%	0.0%	0.2%	0.0%	4.2%	17.6%	56.5%
1985-1995	3004		8.5%	1.1%	0.4%	3.8%	0.1%	2.1%	0.4%	0.0%	0.1%	0.3%	0.5%	0.0%	1.3%	0.0%	0.2%	0.0%	0.1%	0.0%	7.5%	31.0%	42.6%
1996-1998	2532		4.3%	0.1%	0.1%	0.3%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.2%	0.0%	0.0%	0.0%	0.2%	0.0%	0.7%	22.6%	71.5%
1999-2010	8326		5.1%	0.1%	0.2%	0.4%	0.3%	2.1%	0.4%	0.0%	0.1%	0.0%	0.0%	0.0%	0.9%	0.0%	0.1%	0.0%	0.1%	0.0%	6.9%	22.0%	61.4%

Appendix D Age 2 (fingerling stocks) or age 3 (yearling stocks) CWT survival indices (completed brood years only) for exploitation rate indicator stocks and age 2 or 3 Chinook model (EV) survival indices for corresponding model stocks. Some exploitation rate indicator stocks do not have corresponding model stocks. CWT indices are brood year survival divided by the long term average brood year survival. EV indices are brood year EV's divided by the long term average EV's using the same years in the average as the CWT index. The correlation coefficient (r) between CWT and EV survival indices is shown on each figure.

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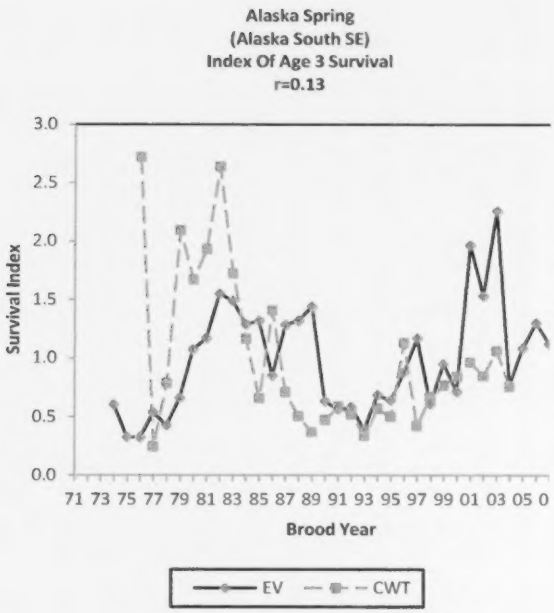

Figure D1. Alaska Spring CWT and Alaska South SE EV indices.

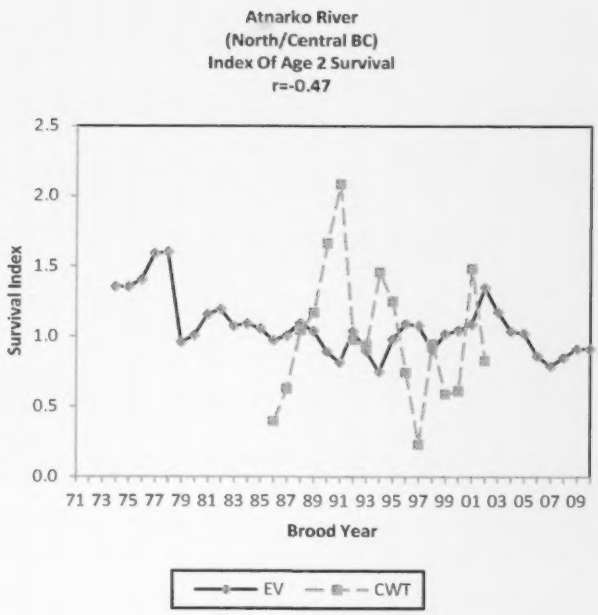

Figure D2. Atnarko River CWT and North/Central BC EV indices.

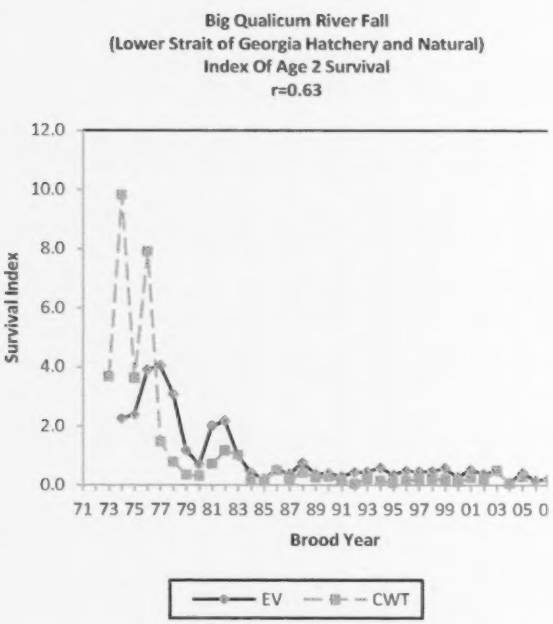

Figure D3. Big Qualicum River Fall CWT and Lower Strait of Georgia

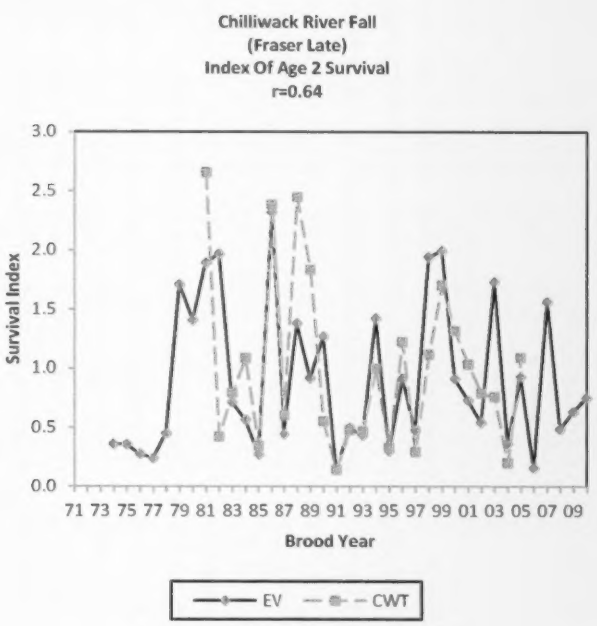

Figure D4. Chilliwack River Fall CWT and Fraser Late EV indices.

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Figure D5. Chilkat River CWT index.

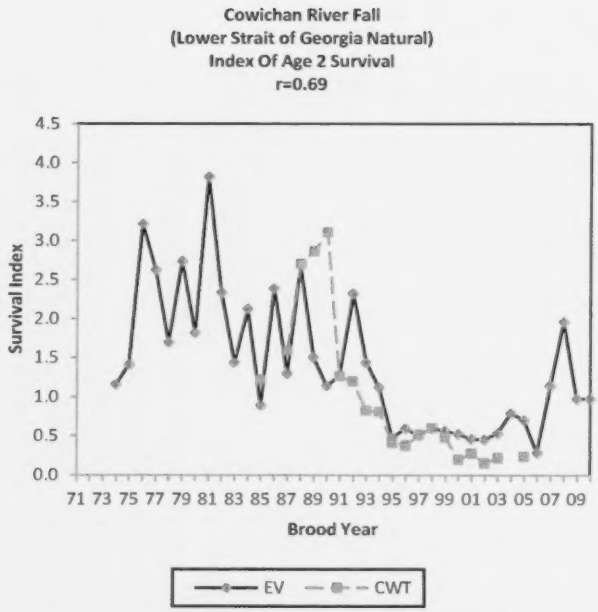


Figure D6. Cowichan River Fall CWT and Lower Strait of Georgia Natural EV indices.

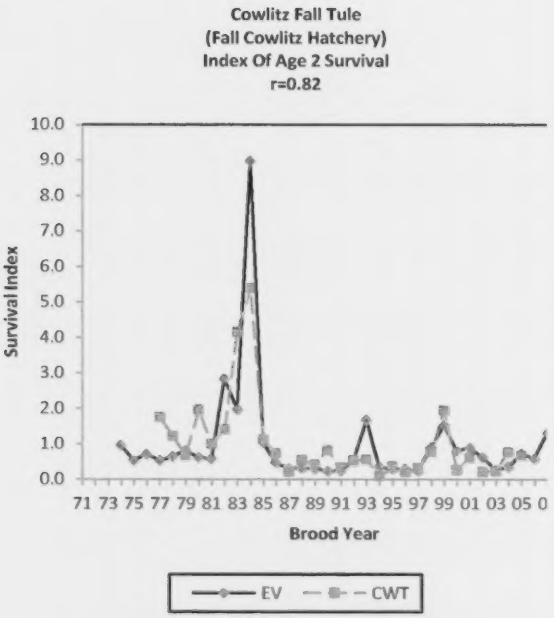


Figure D7. Cowlitz Fall Tule CWT and Fall Cowlitz Hatchery EV indices.

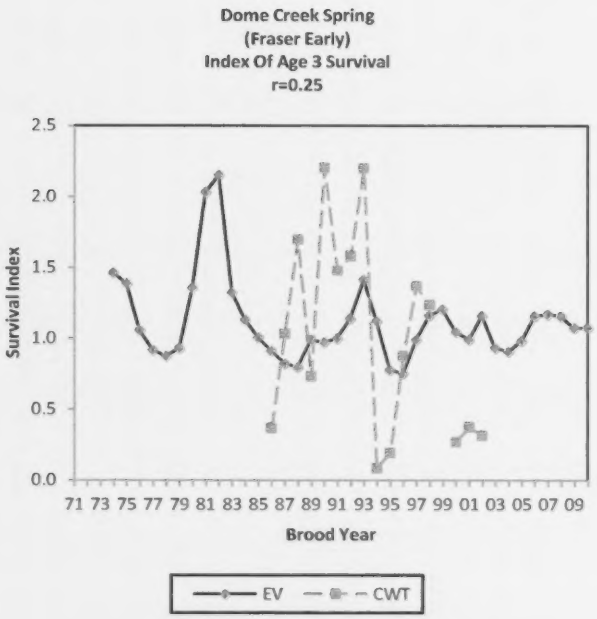


Figure D8. Dome Creek Spring CWT and Fraser Early EV indices.

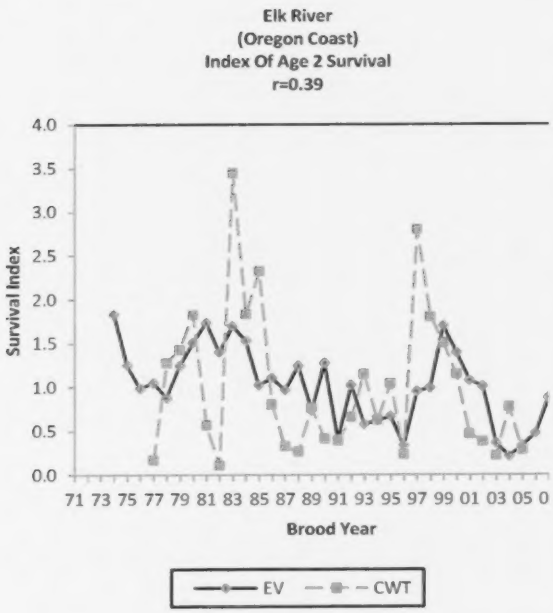


Figure D9. Elk River CWT and Oregon Coast EV indices.

Figure D10. Elwha River CWT index.

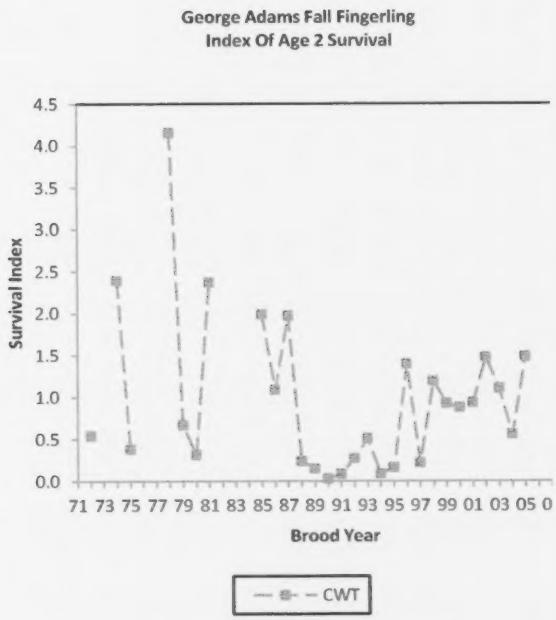


Figure D11. George Adams Fall Fingerling CWT index.

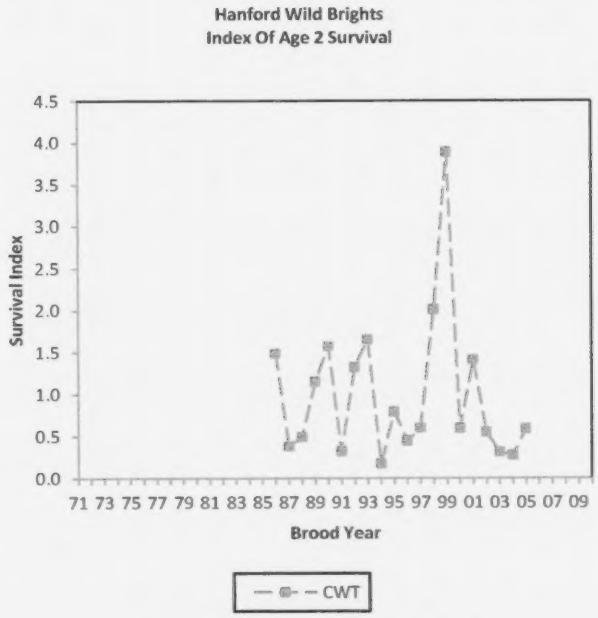


Figure D12. Hanford Wild Brights CWT index.

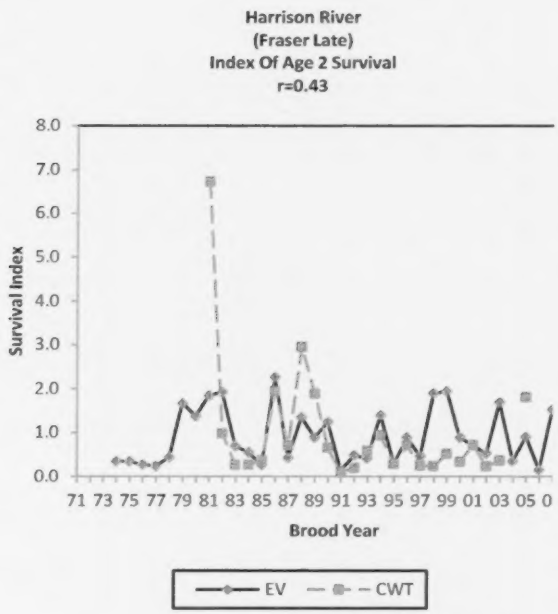


Figure D13. Harrison River CWT and Fraser Late EV indices.

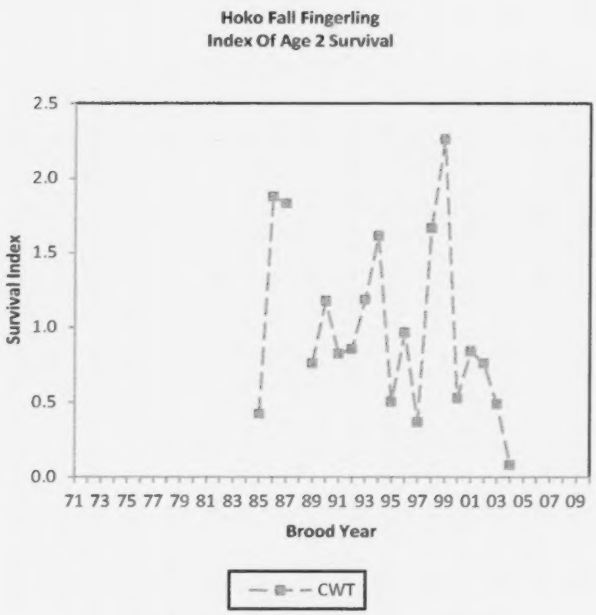


Figure D14. Hoko Fall Fingerling CWT index.

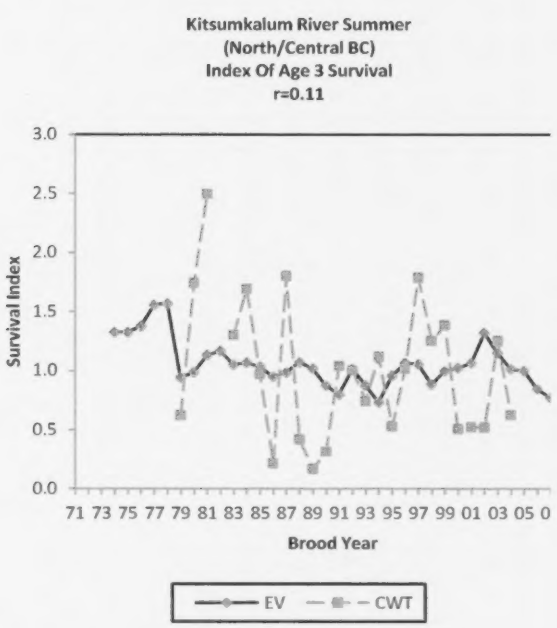


Figure D15. Kitsumkalum River Summer CWT and North/Central BC EV indices.

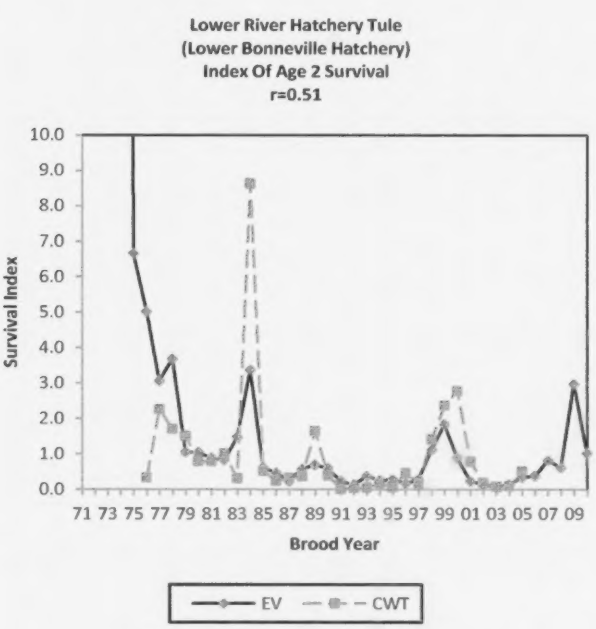


Figure D16. Lower River Hatchery Tule CWT and Lower Bonneville Hatchery EV indices.

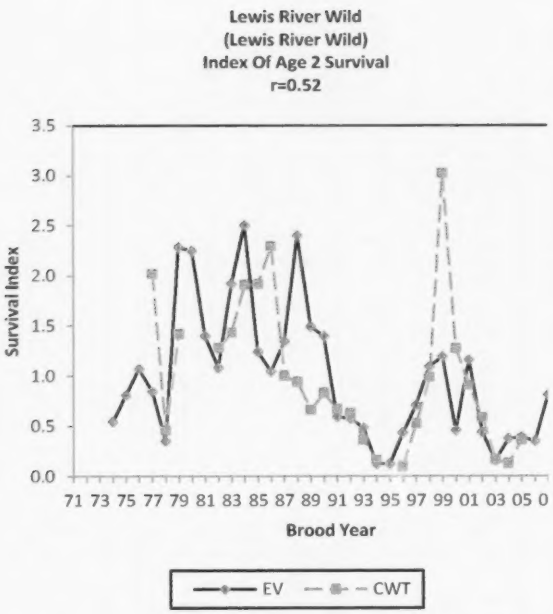


Figure D17. Lewis River Wild CWT and Lewis River Wild EV indices.

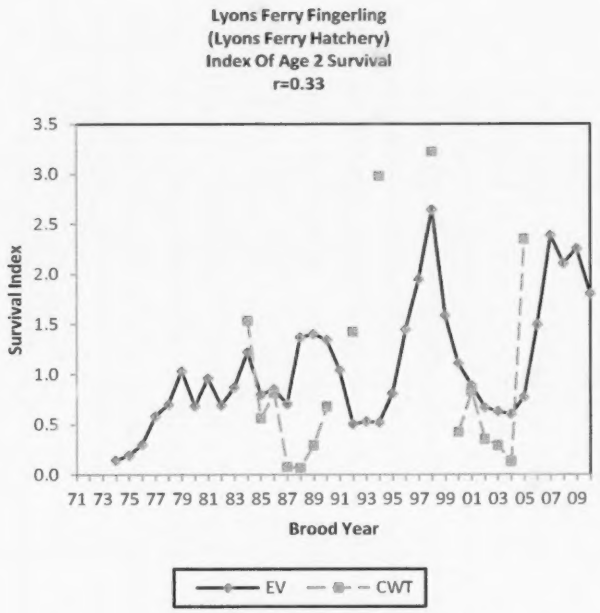


Figure D18. Lyons Ferry Fingerling CWT and Lyons Ferry Hatchery EV indices.

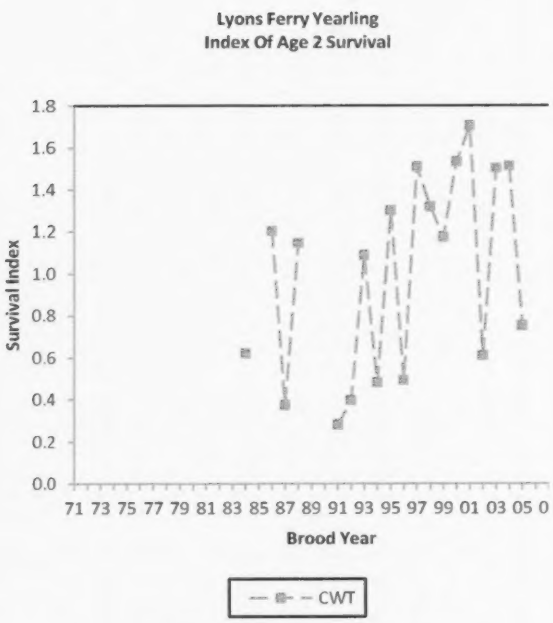


Figure D19. Lyons Ferry Yearling CWT index.

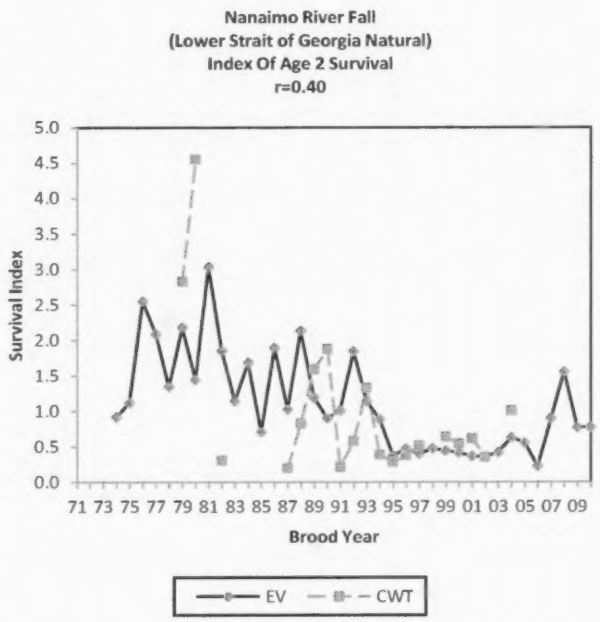


Figure D20. Nanaimo River Fall CWT and Lower Strait of Georgia Natural EV indices.

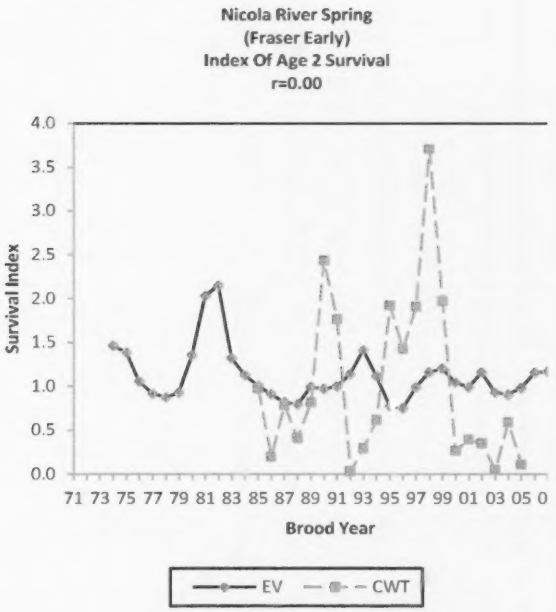


Figure D21. Nicola River Spring CWT and Fraser Early EV indices.

Figure D22. Nisqually Fall Fingerling CWT index.

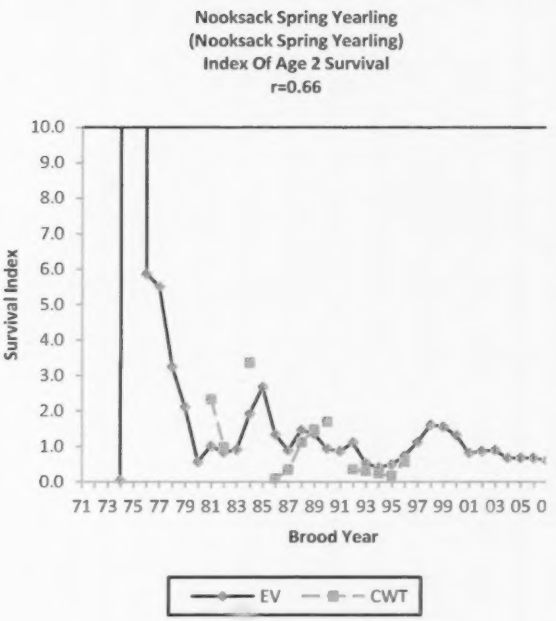


Figure D23. Nooksack Spring Yearling CWT and Nooksack Spring Yearling EV indices.

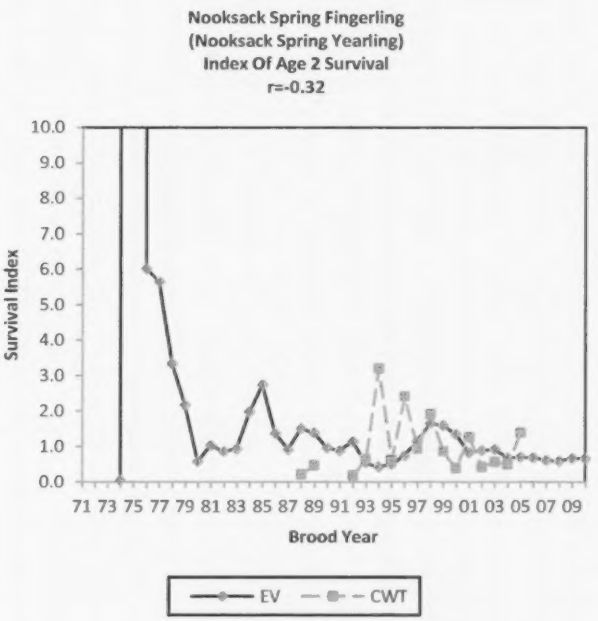


Figure D24. Nooksack Spring Fingerling CWT and Nooksack Spring Yearling EV indices.

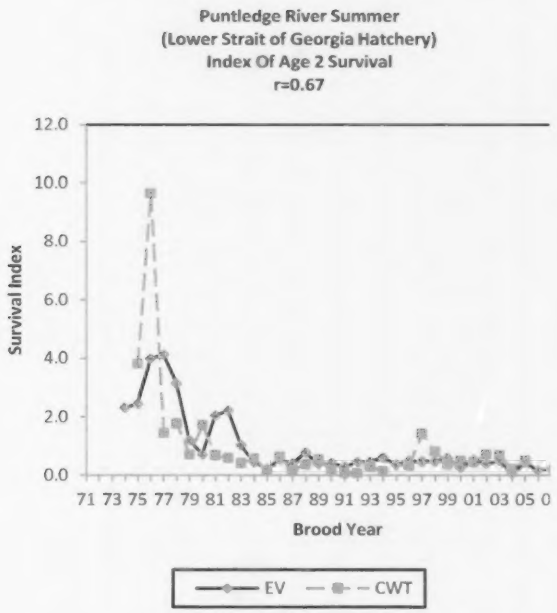


Figure D25. Puntledge River Summer CWT and Lower Strait of Georgia Hatchery EV indices.

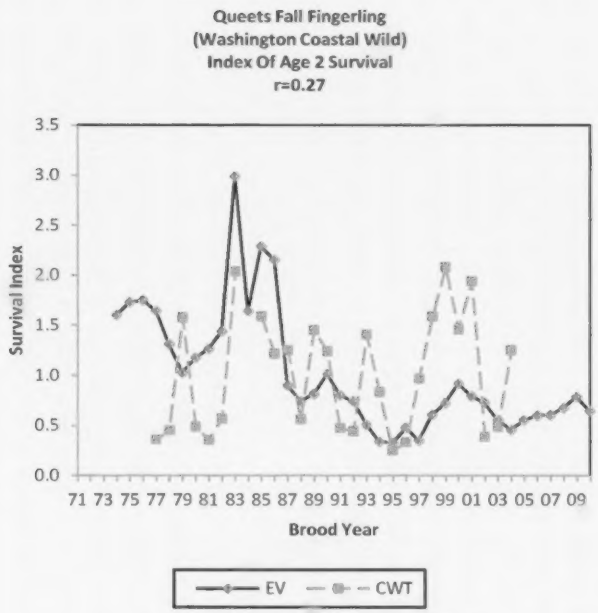


Figure D26. Queets Fall Fingerling CWT and Washington Coastal Wild EV indices.

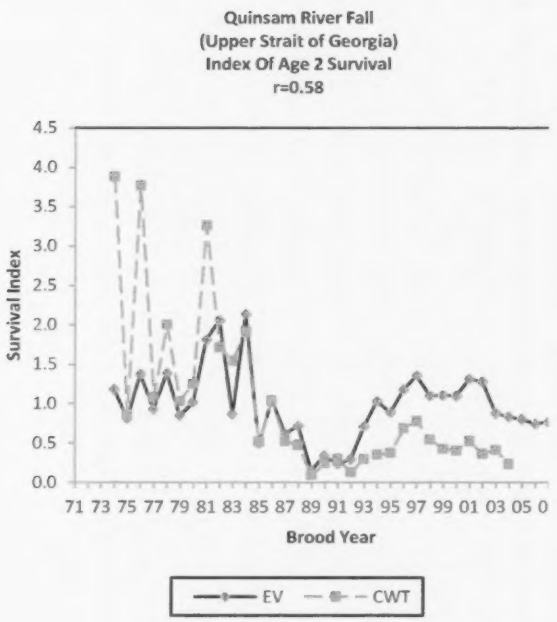


Figure D27. Quinsam River Fall CWT and Upper Strait of Georgia EV indices.

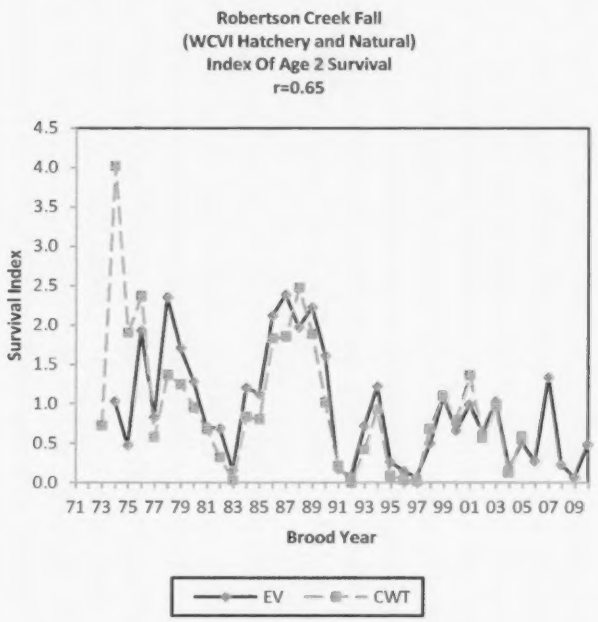


Figure D28. Robertson Creek Fall CWT and WCVI Hatchery and Natural EV indices.

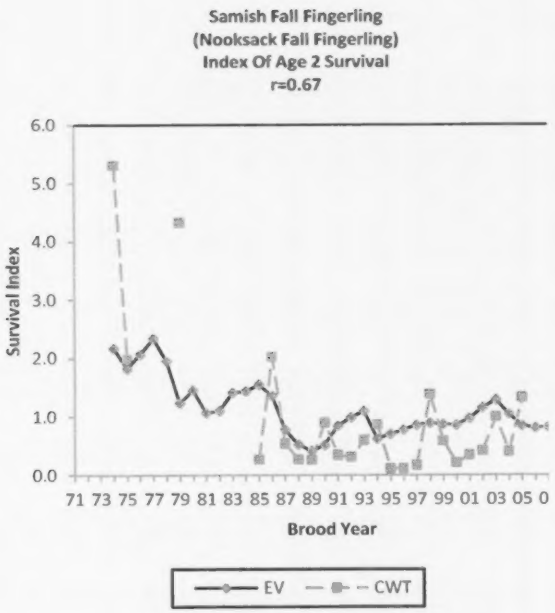


Figure D29. Samish Fall Fingerling CWT and Nooksack Fall Fingerling EV indices.

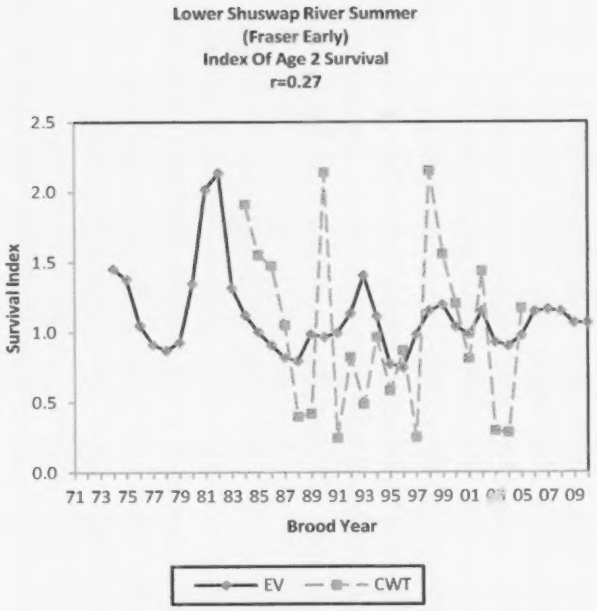


Figure D30. Lower Shuswap River Summer CWT and Fraser Early EV indices.

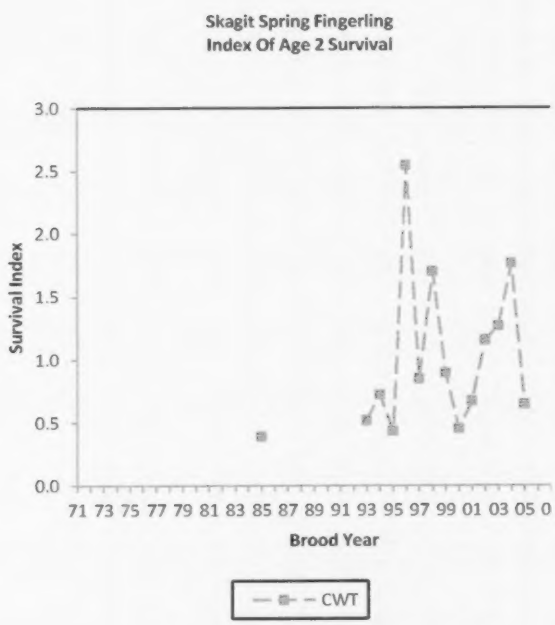


Figure D31. Skagit Spring Fingerling CWT index.

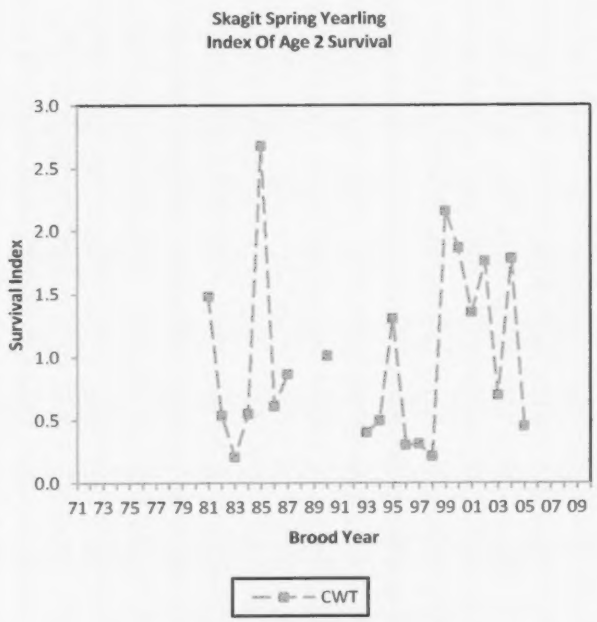
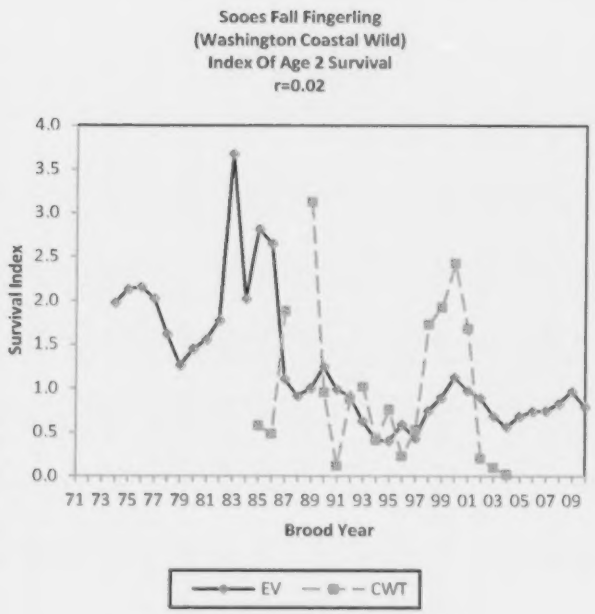


Figure D32. Skagit Spring Yearling CWT index.

Figure D33. Skykomish Fall Fingerling CWT and Snohomish Wild EV indices.



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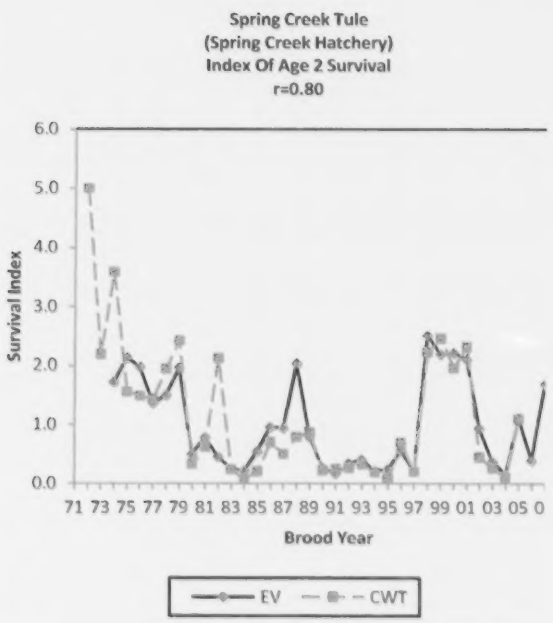

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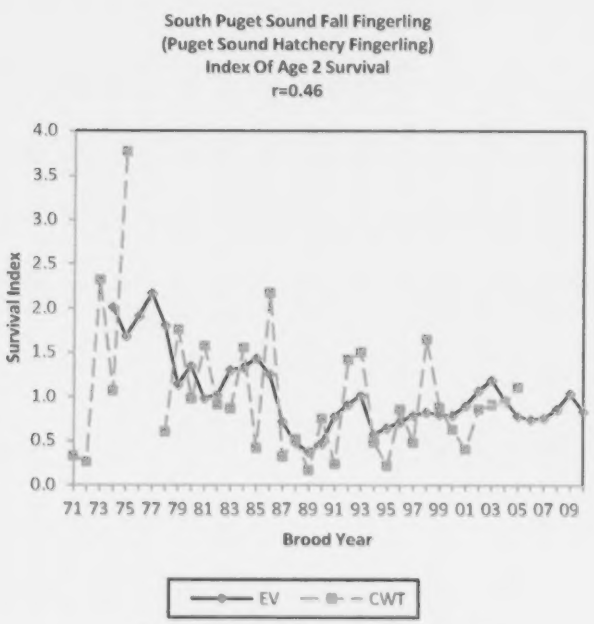


Figure D36. South Puget Sound Fall Fingerling CWT and Puget Sound Hatchery Fingerling EV indices.

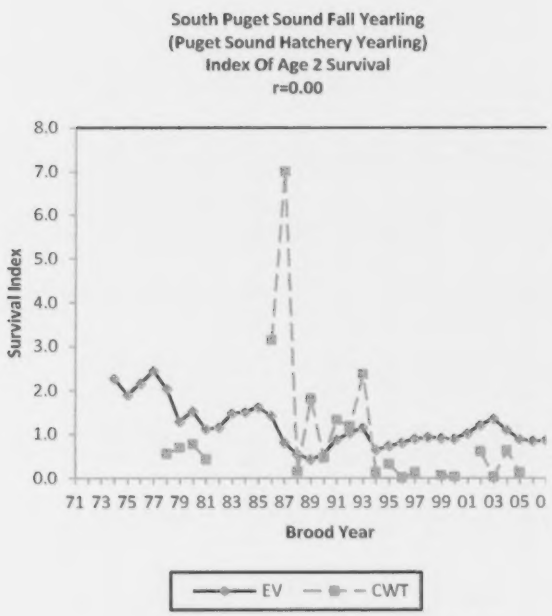


Figure D37. South Puget Sound Fall Yearling CWT and Puget Sound Hatchery Yearling EV indices.

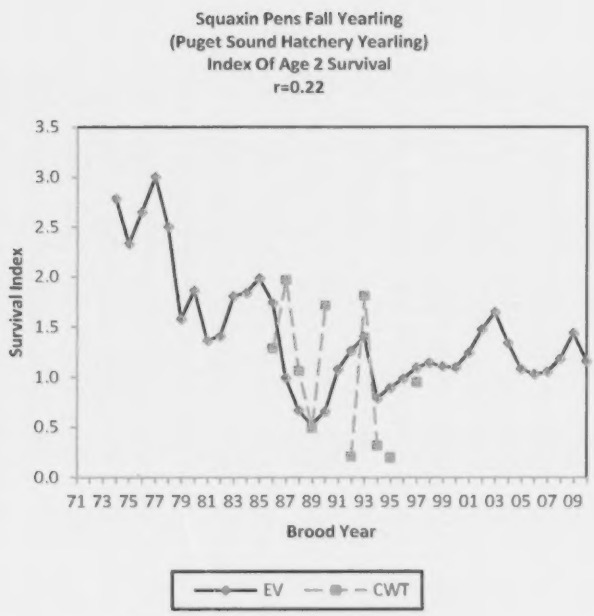


Figure D38. Squaxin Pens Fall Yearling CWT and Puget Sound Hatchery Yearling EV indices.

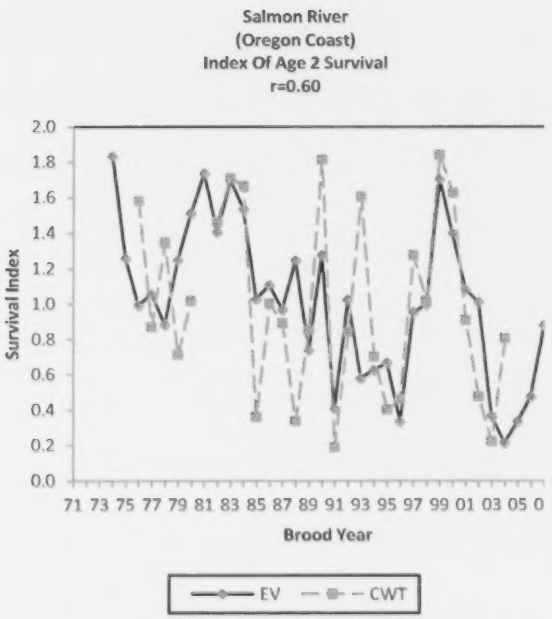


Figure D39. Salmon River CWT and Oregon Coast EV indices.

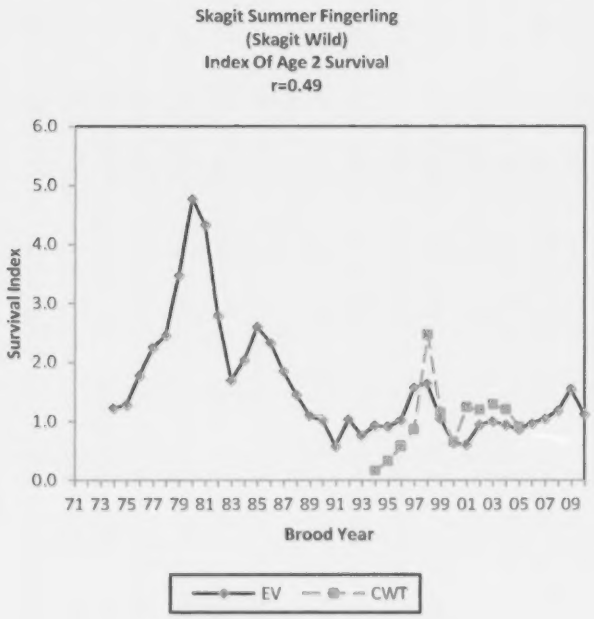
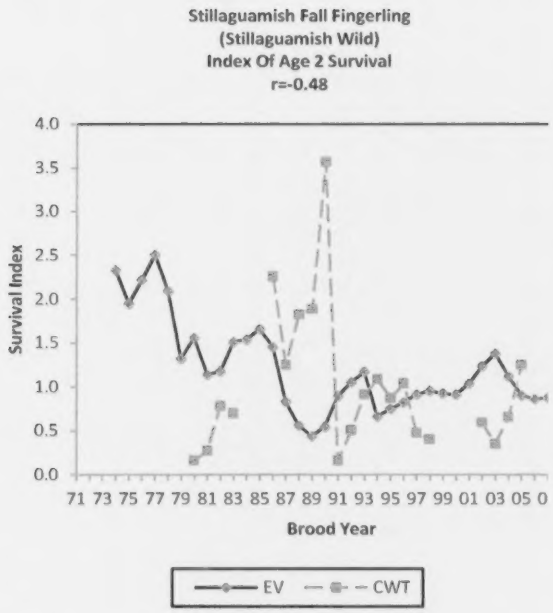


Figure D40. Skagit Summer Fingerling CWT and Skagit Wild EV indices.



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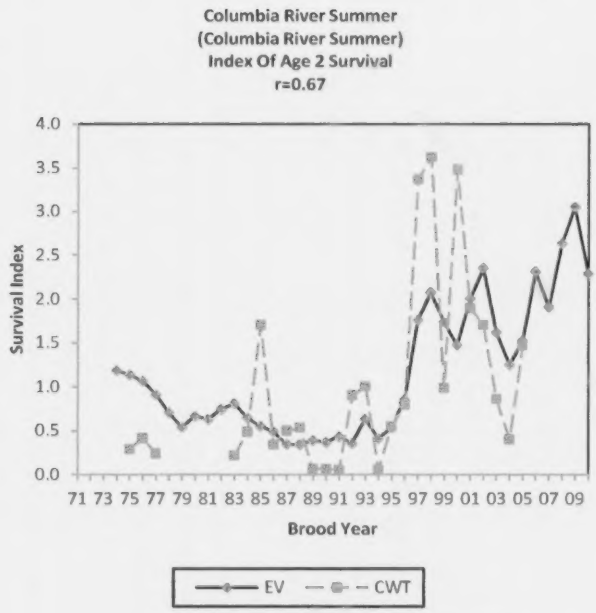

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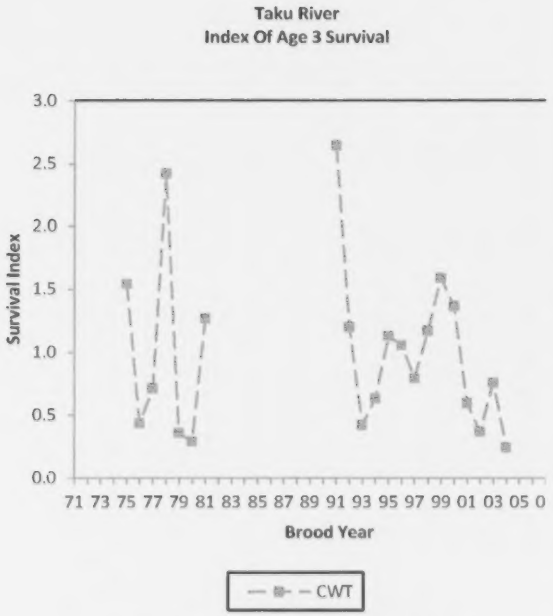

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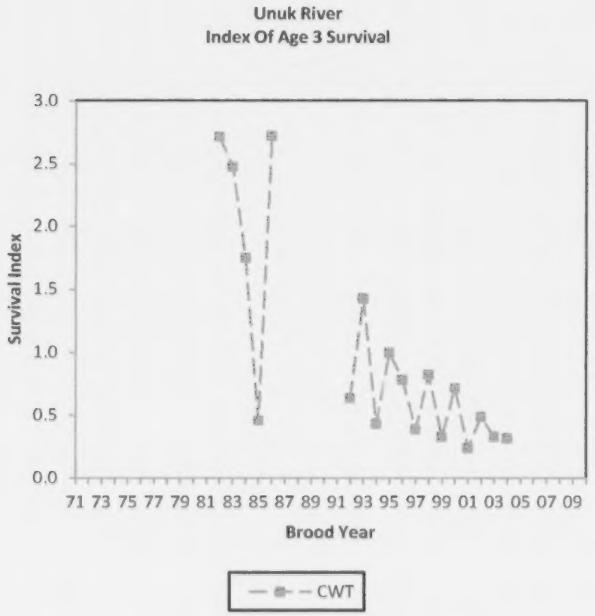

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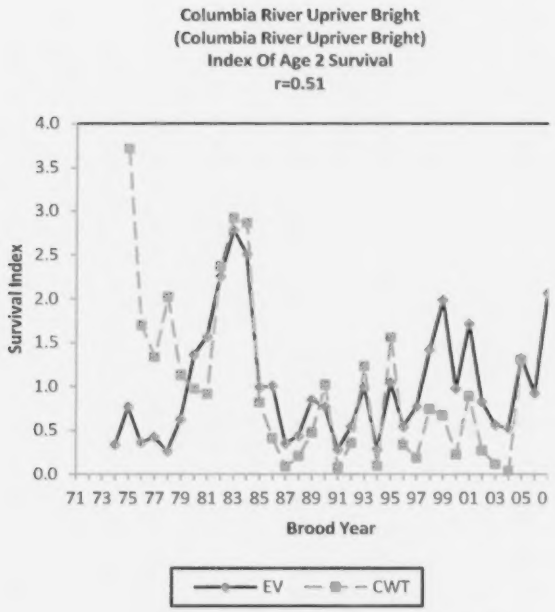

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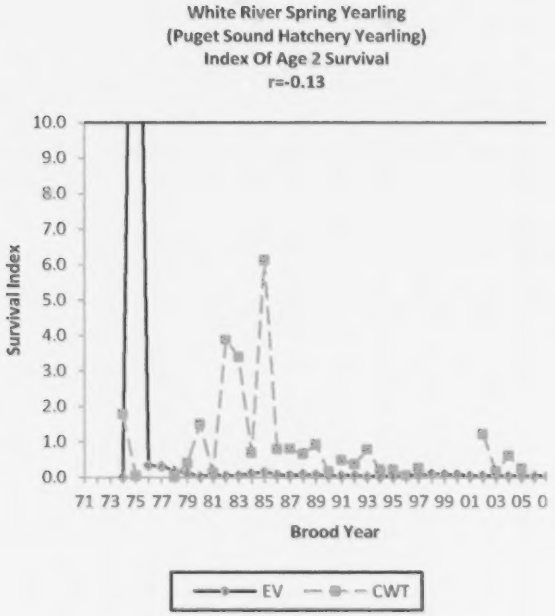

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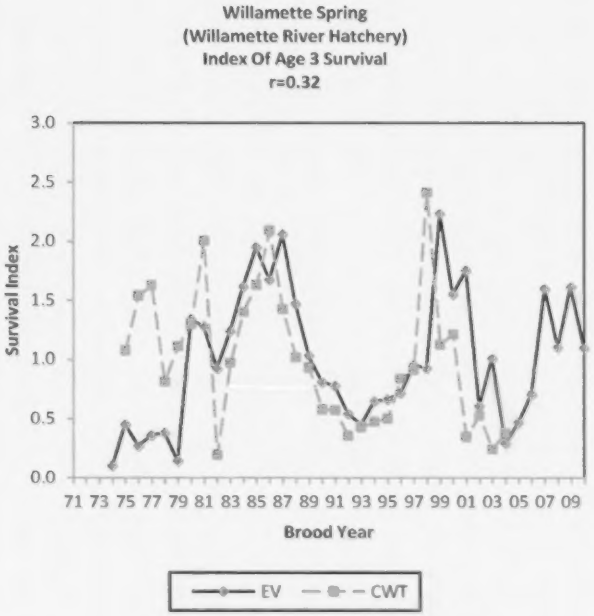

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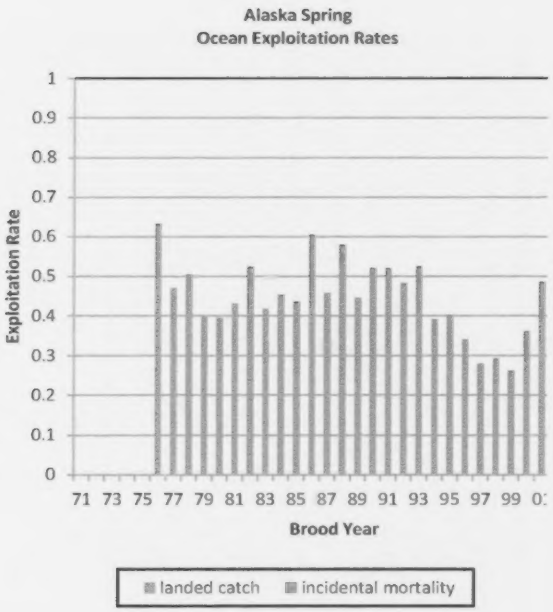


Figure E1. Alaska Spring (Alaska South SE) ocean exploitation rates by brood year.

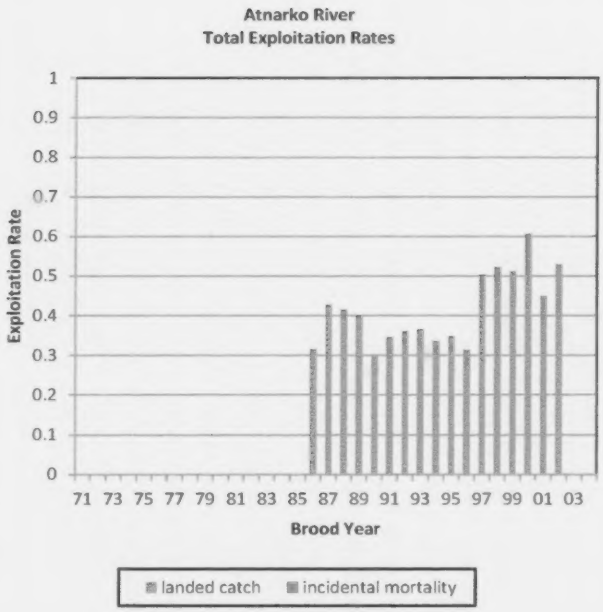
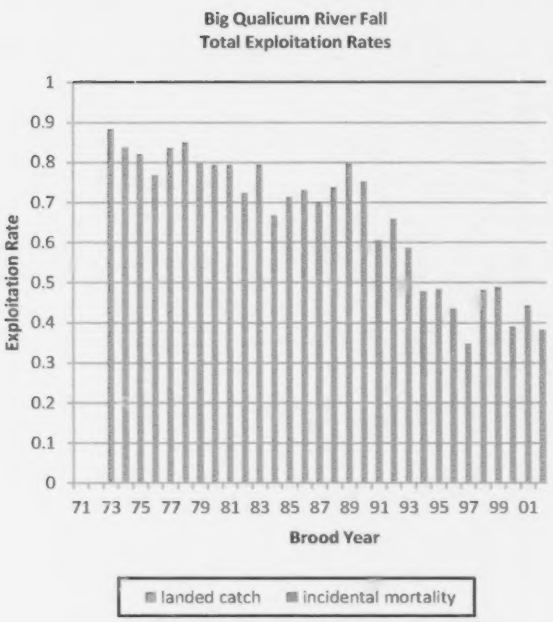


Figure E2. Atnarko River (North/Central BC) total exploitation rates by brood year.



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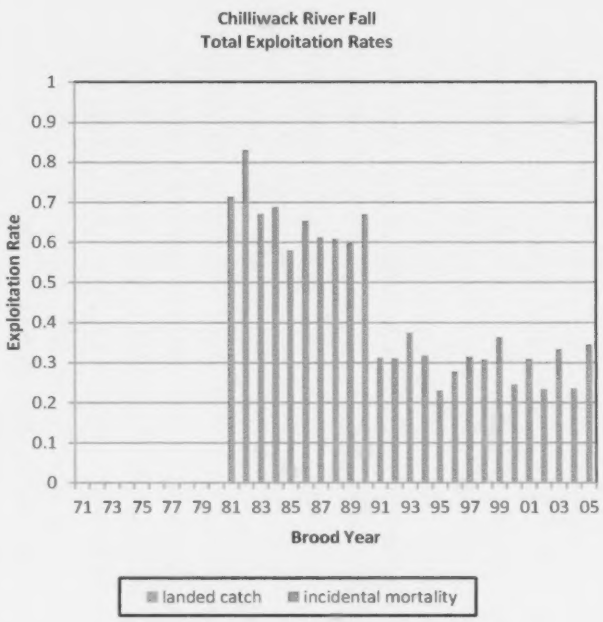


Figure E4. Chilliwack River Fall (Fraser Late) total exploitation rates by brood year.

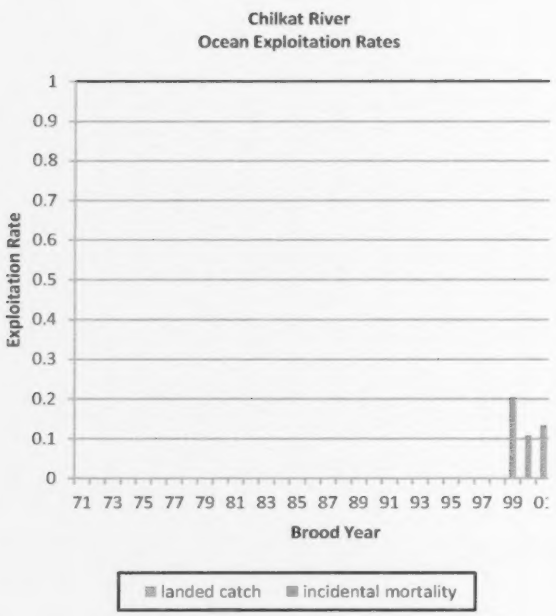
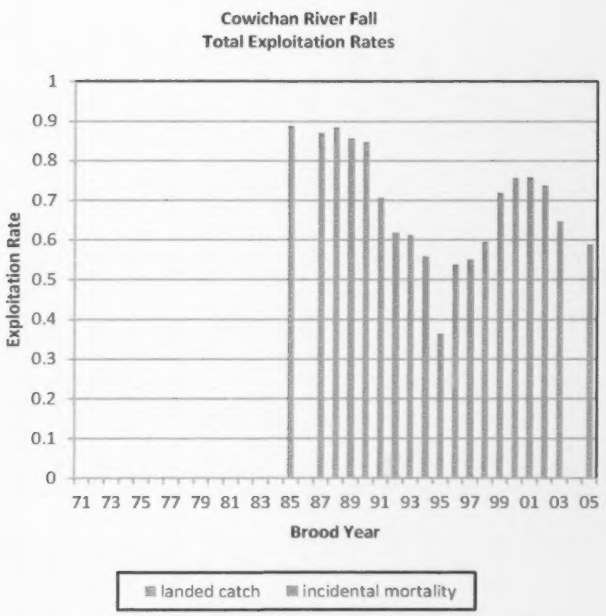


Figure E5. Chilkat River ocean exploitation rates by brood year.



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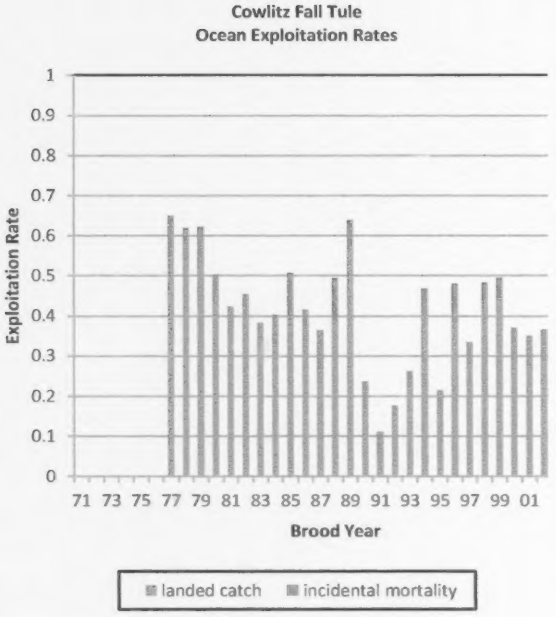

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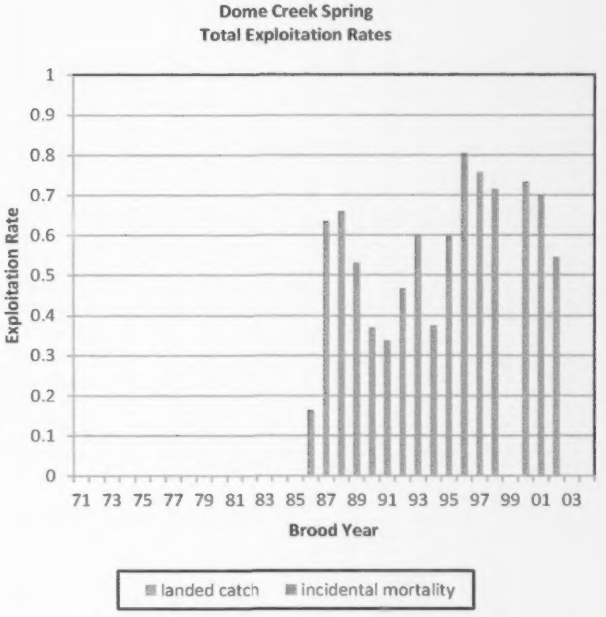

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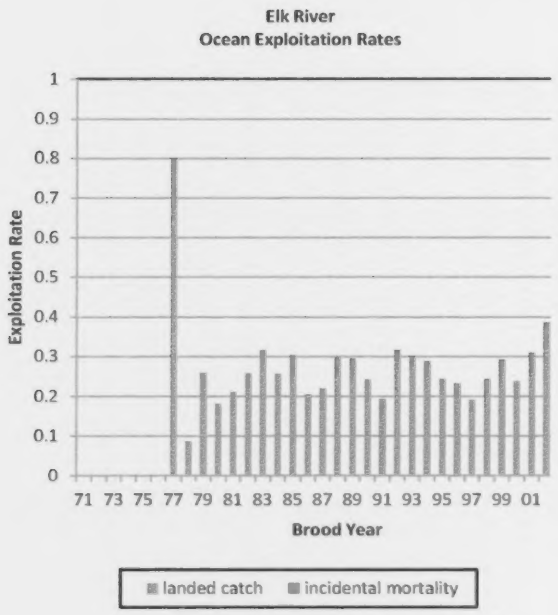

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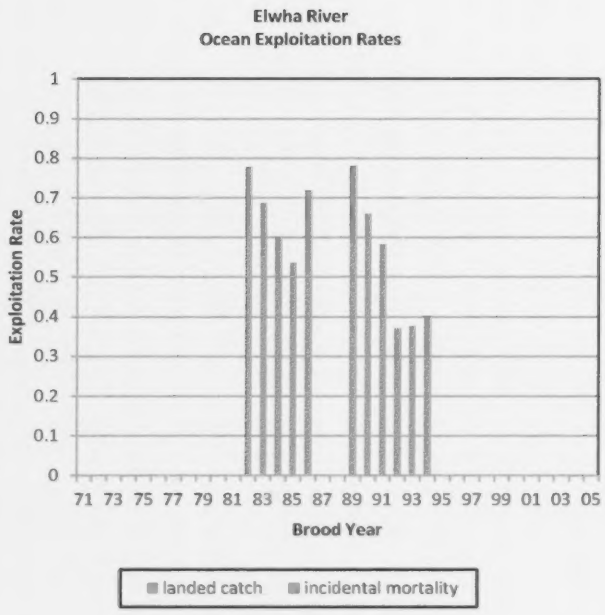

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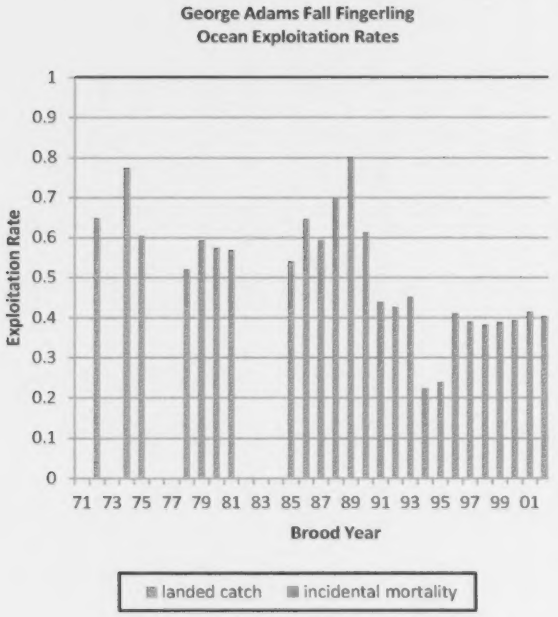

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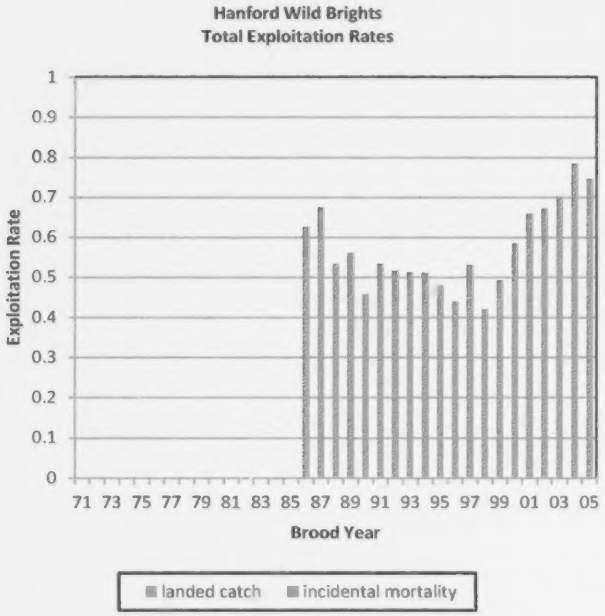

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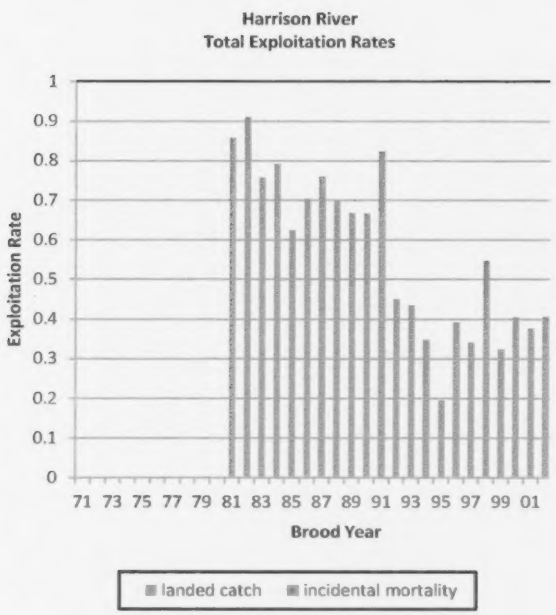

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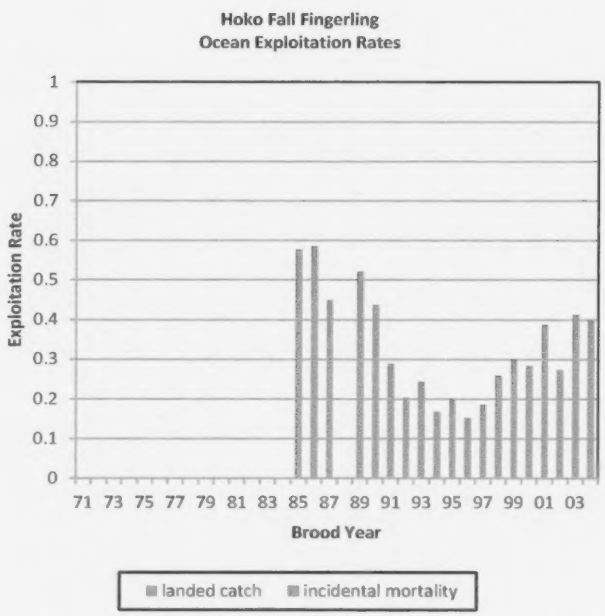

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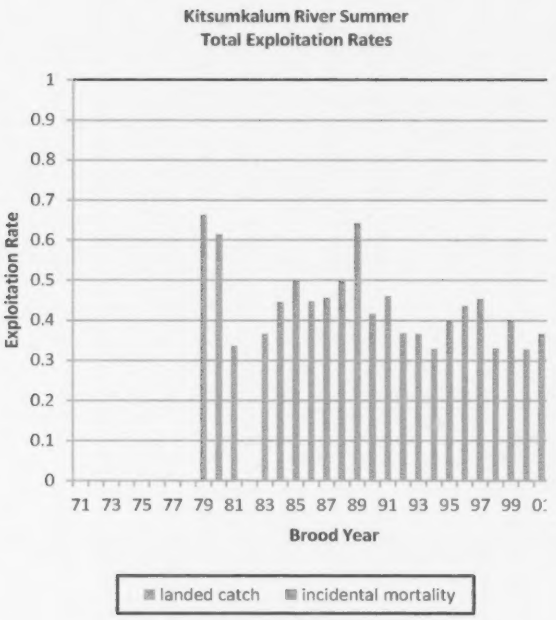

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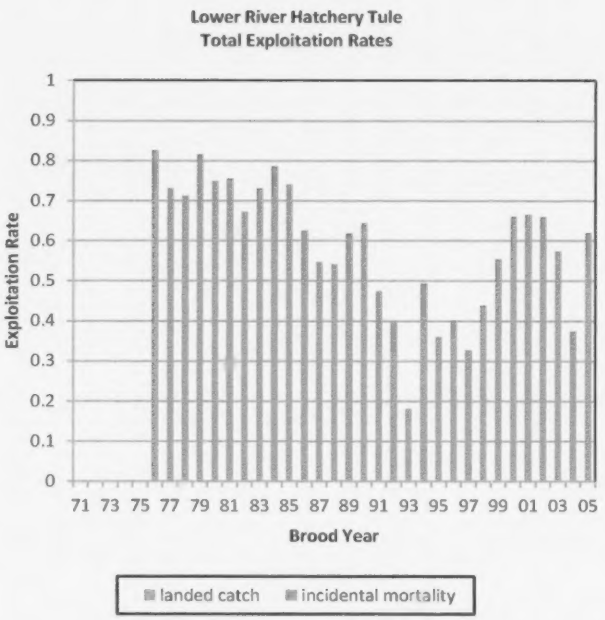

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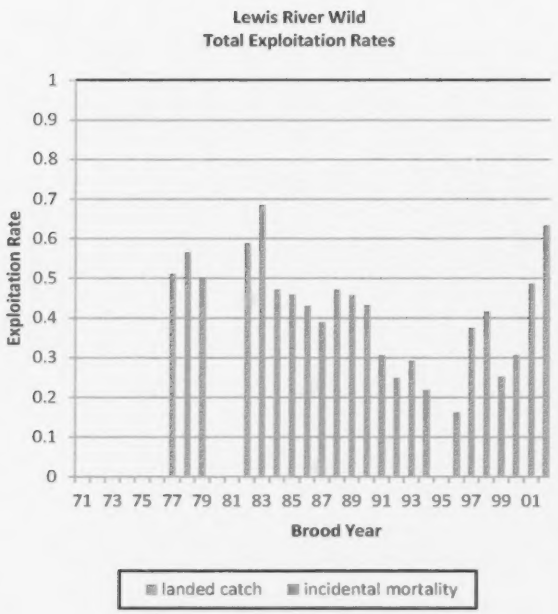

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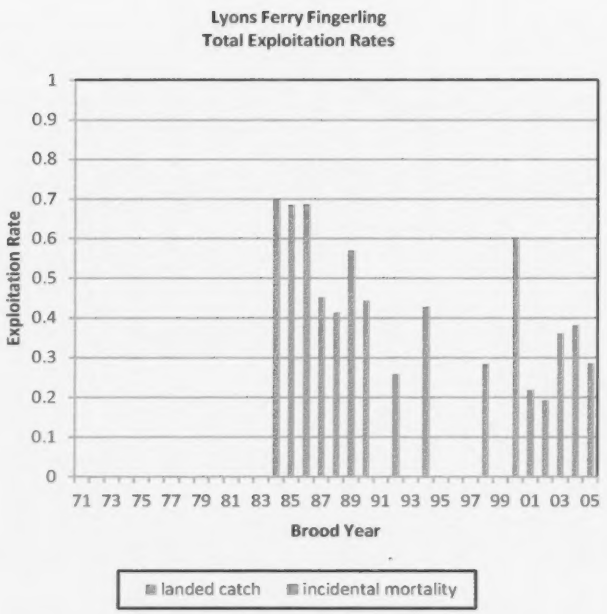

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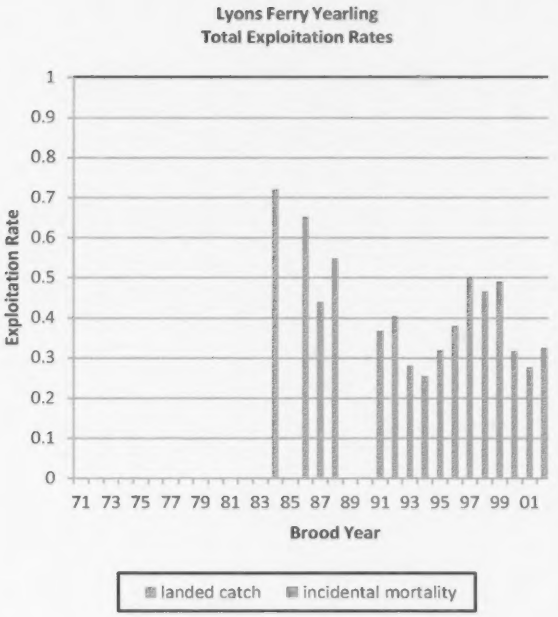

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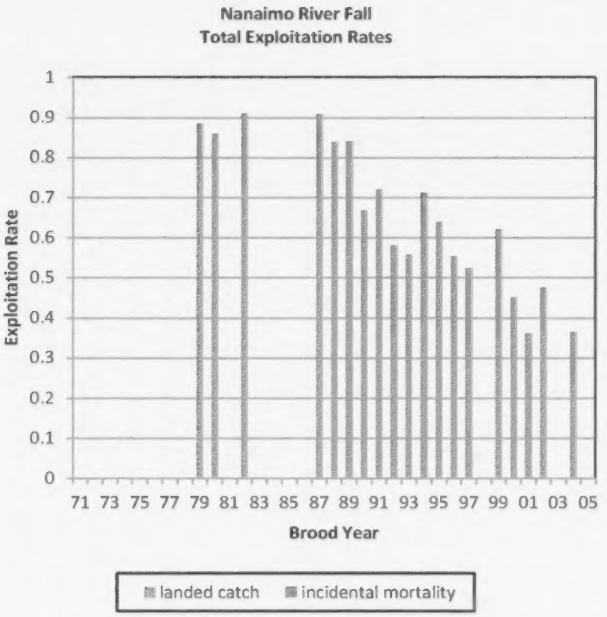

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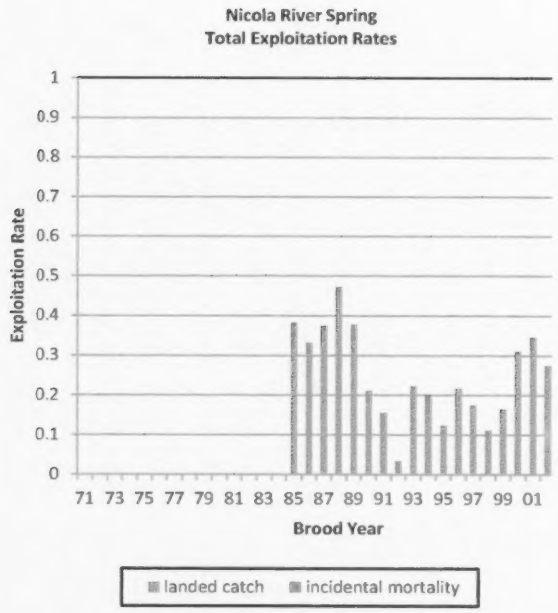

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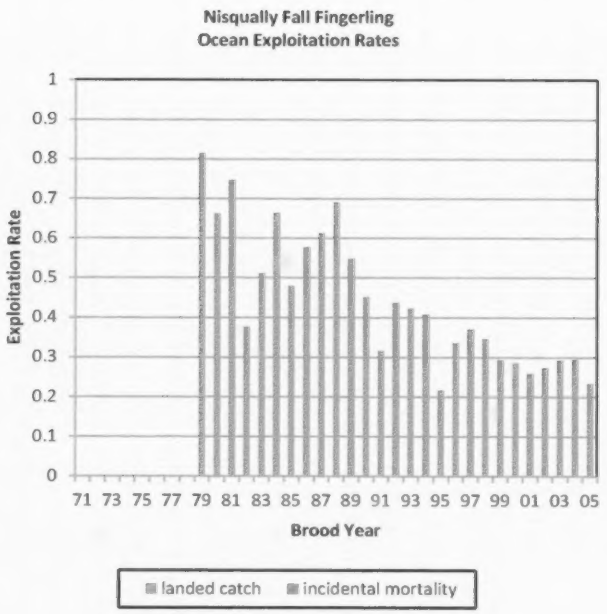

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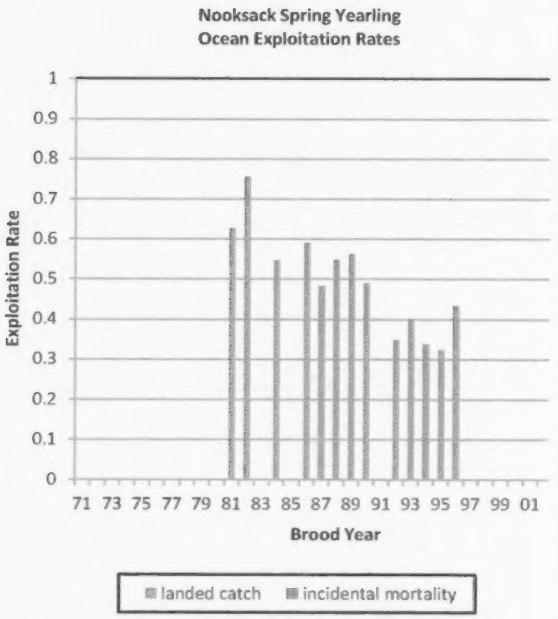

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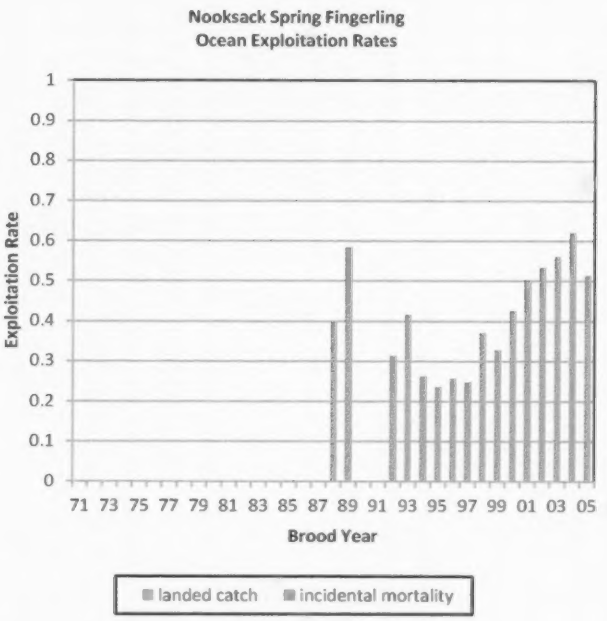

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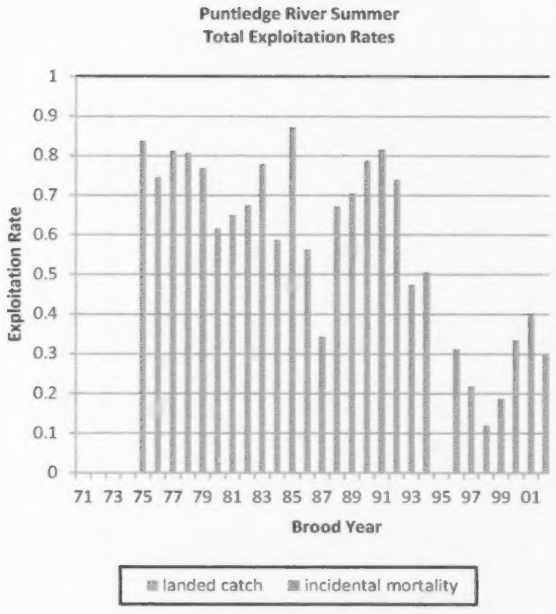

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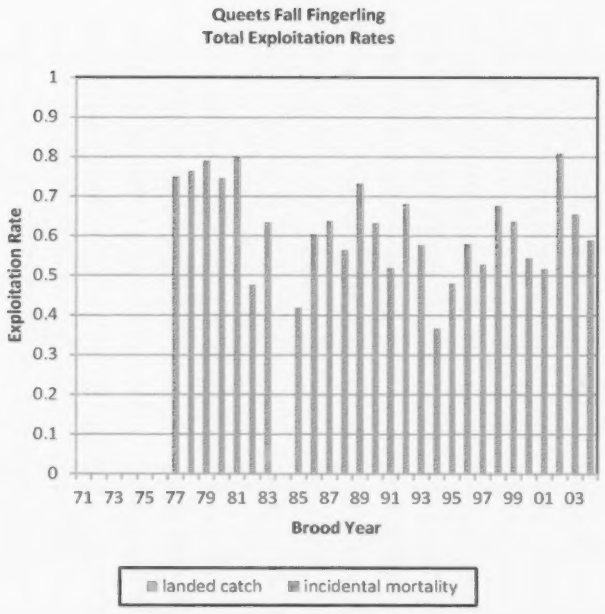

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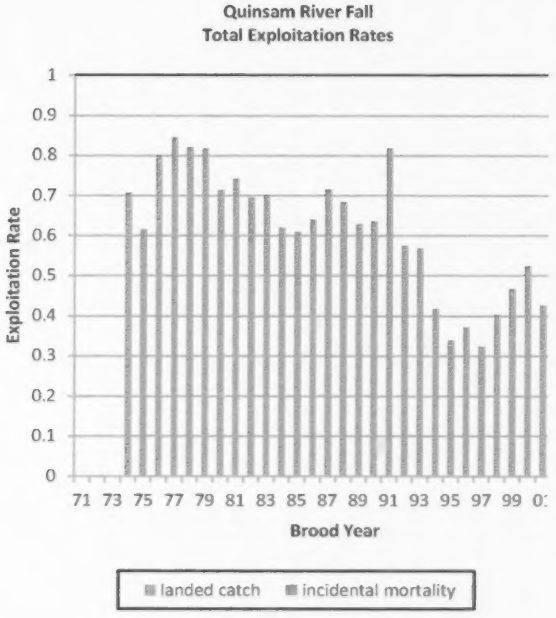

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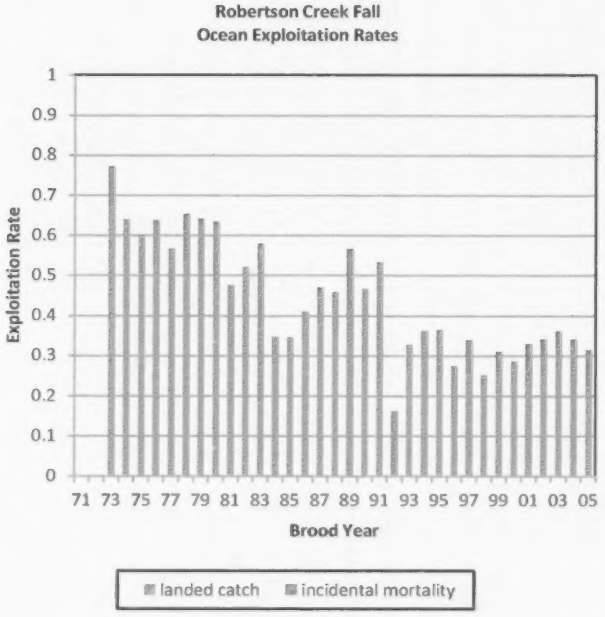

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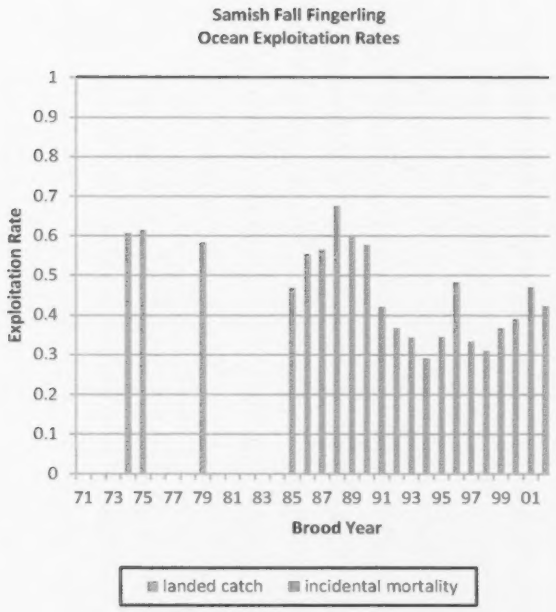

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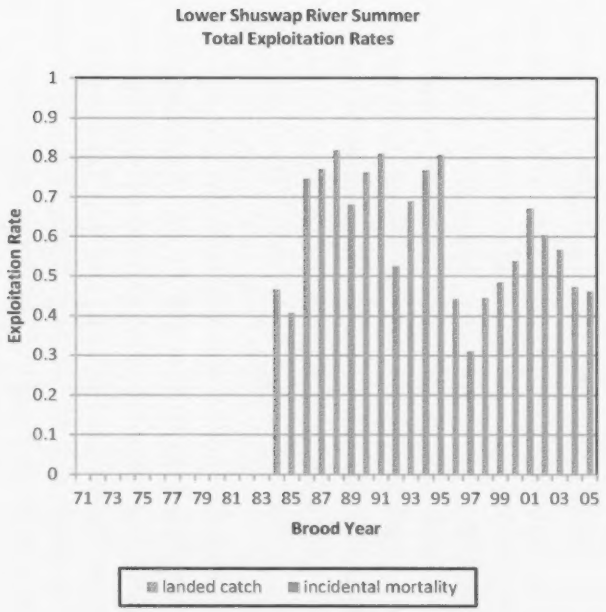

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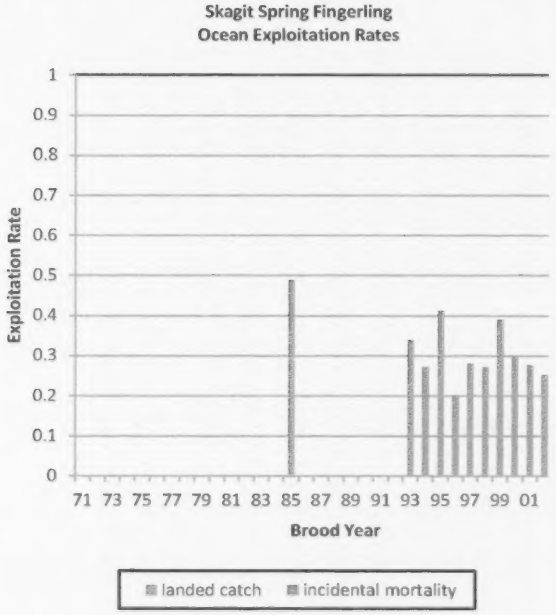

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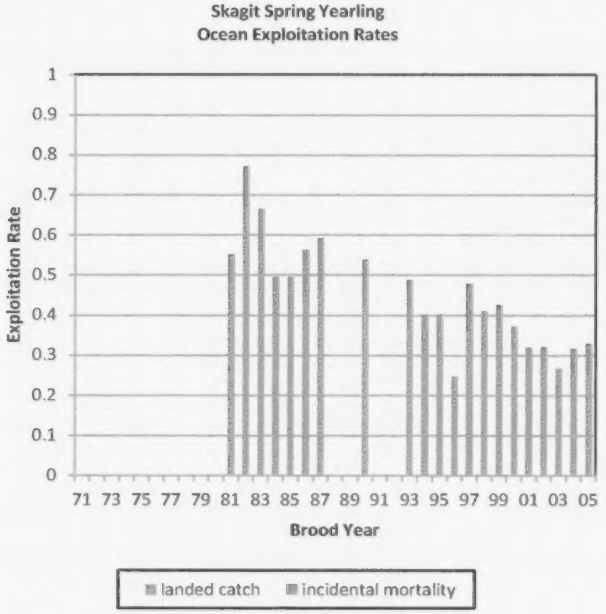

Figure E32. Skagit Spring Yearling ocean exploitation rates by brood year.

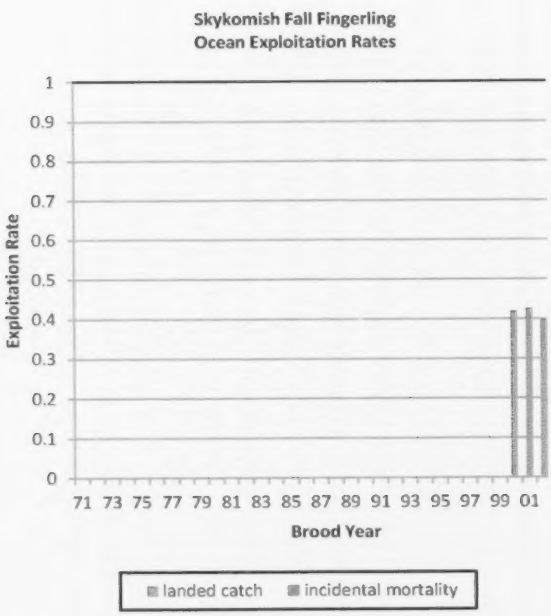

Figure E33. Skykomish Fall Fingerling (Snohomish Wild) ocean exploitation rates by brood year.

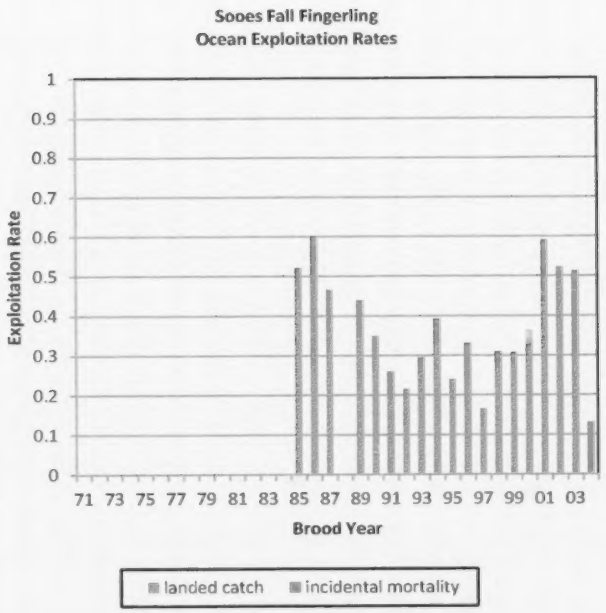

Figure E34. Sooes Fall Fingerling (Washington Coastal Wild) ocean exploitation rates by brood year.

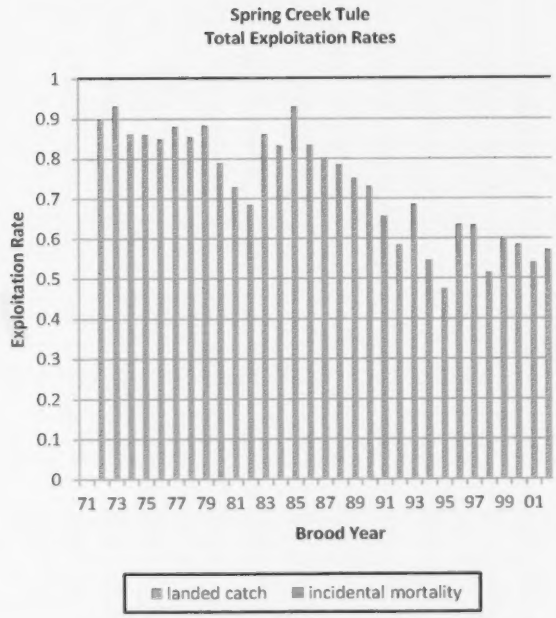

Figure E35. Spring Creek Tule (Spring Creek Hatchery) total exploitation rates by brood year.

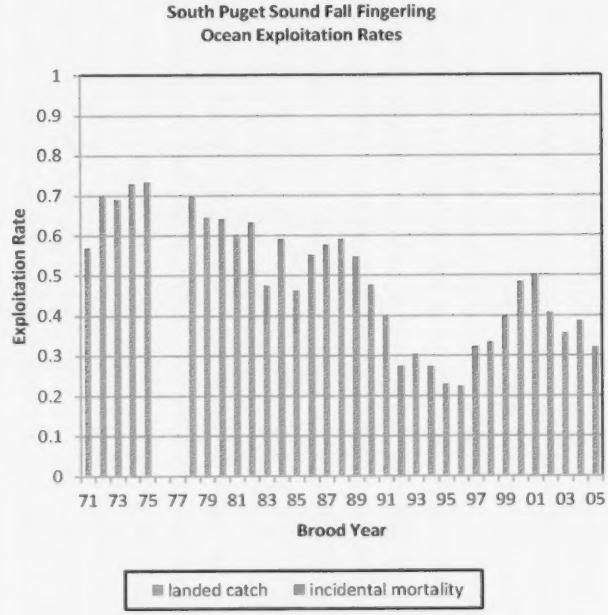

Figure E36. South Puget Sound Fall Fingerling (Puget Sound Hatchery Fingerling) ocean exploitation rates by brood year.

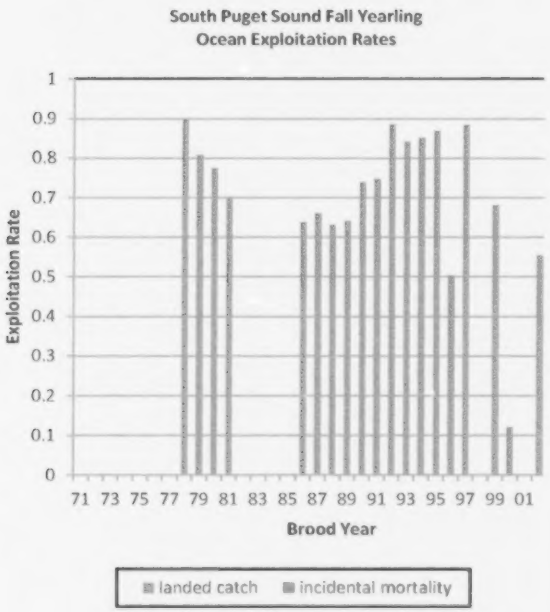

Figure E37. South Puget Sound Fall Yearling (Puget Sound Hatchery Yearling) ocean exploitation rates by brood year.

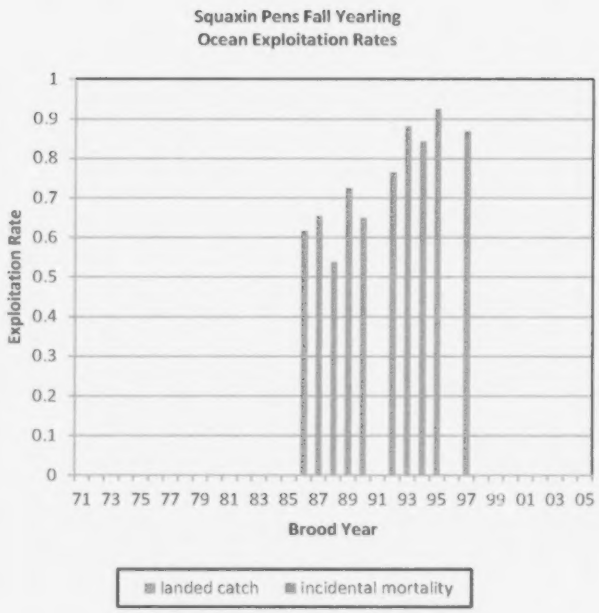

Figure E38. Squaxin Pens Fall Yearling (Puget Sound Hatchery Yearling) ocean exploitation rates by brood year.

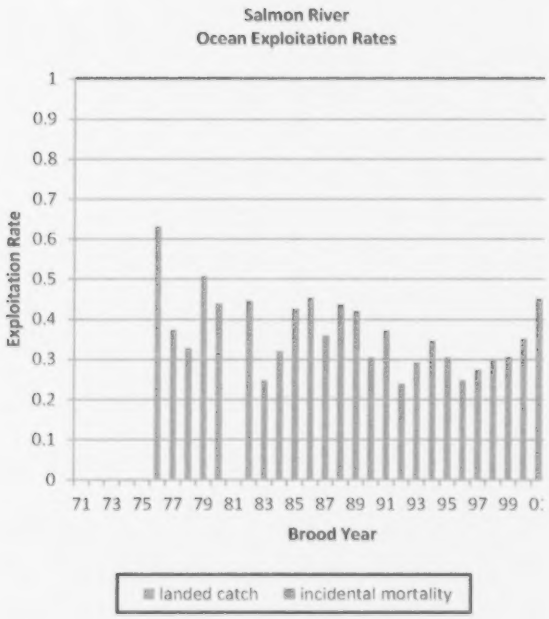

Figure E39. Salmon River (Oregon Coast) ocean exploitation rates by brood year.

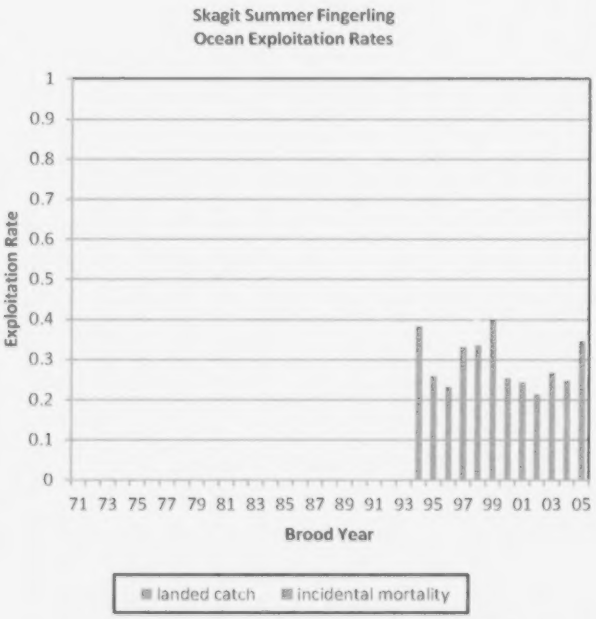

Figure E40. Skagit Summer Fingerling (Skagit Wild) ocean exploitation rates by brood year.

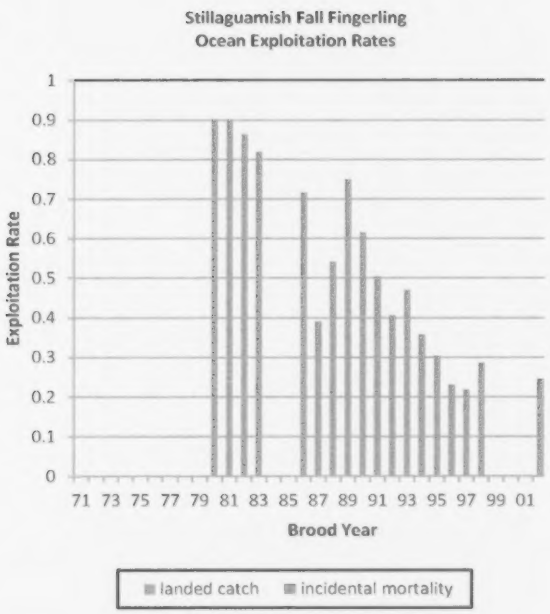

Figure E41. Stillaguamish Fall Fingerling (Stillaguamish Wild) ocean exploitation rates by brood year.

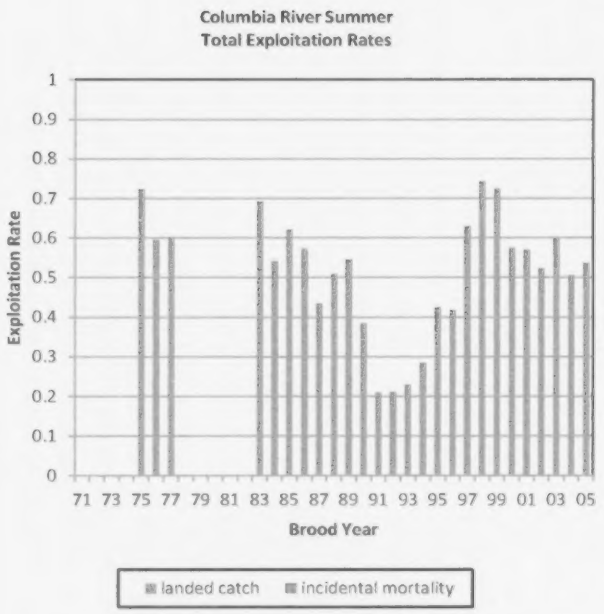

Figure E42. Columbia River Summer (Columbia River Summer) total exploitation rates by brood year.

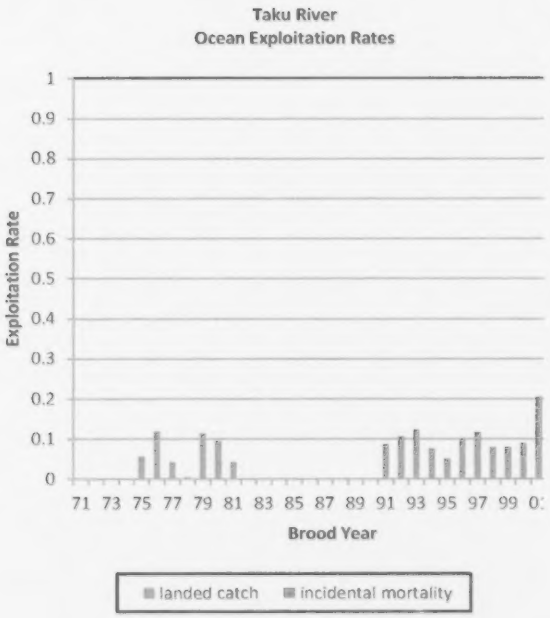

Figure E43. Taku River ocean exploitation rates by brood year.

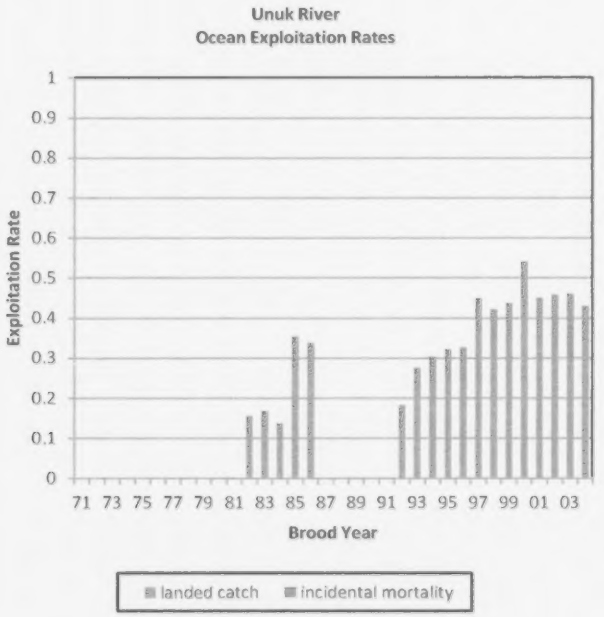

Figure E44. Unuk River ocean exploitation rates by brood year.

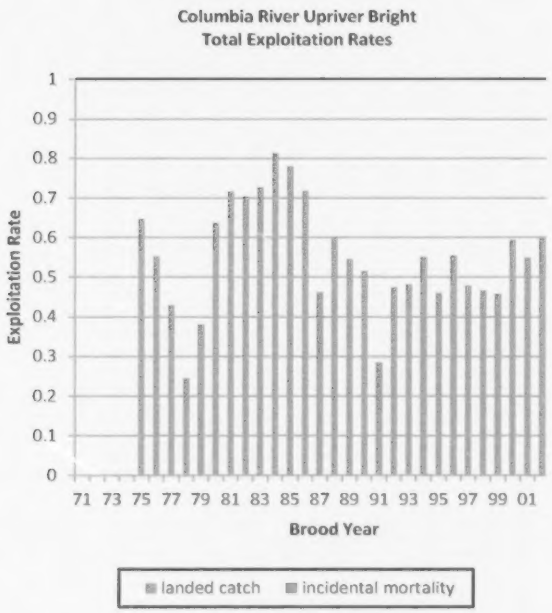

Figure E45. Columbia River Upriver Bright (Columbia River Upriver Bright) total exploitation rates by brood year.

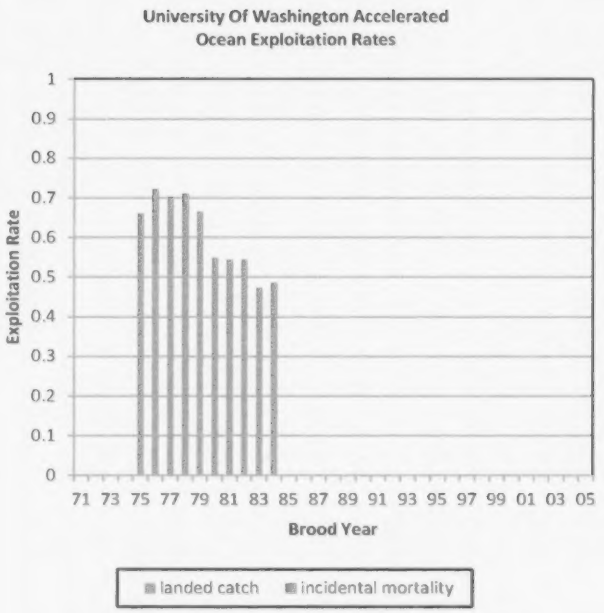

Figure E46. University Of Washington Accelerated ocean exploitation rates by brood year.

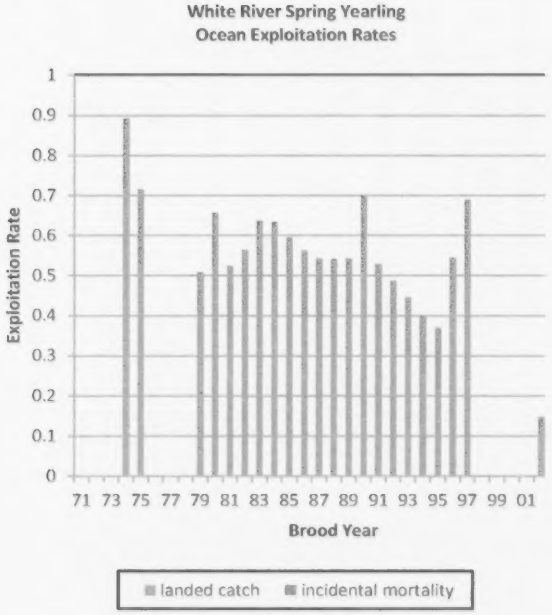

Figure E47. White River Spring Yearling (Puget Sound Hatchery Yearling) ocean exploitation rates by brood year.

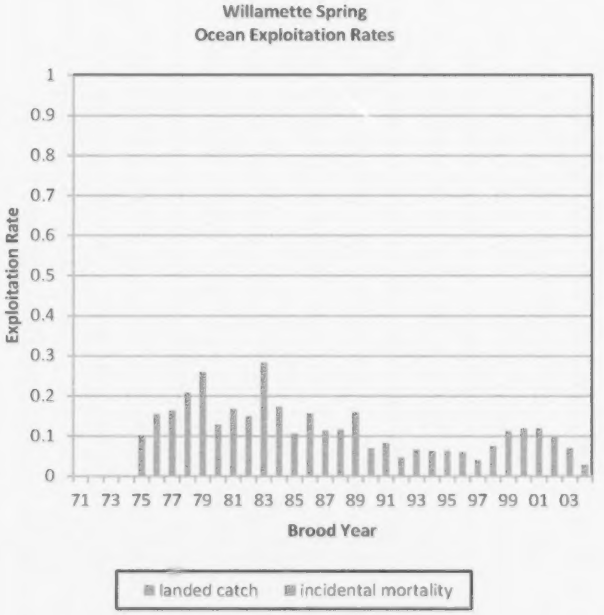

Figure E48. Willamette Spring (Willamette River Hatchery) ocean exploitation rates by brood year.

Appendix F Total mortality and landed catch exploitation rates for exploitation rate indicator stocks with analogous model stocks in parentheses (complete broods only).

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Appendix F.1. Southeast Alaska All Gear

FISHERY:	SE ALASKA ALL GEAR				
	2011	Average (1985-2010)			
Model Stock	% of Fishery Catch	% of Fishery Catch	% of Stock Catch	% of Stock Total Return	Associated Escapement Indicator Stocks[1]
North/Central BC	10.37%	16.52%	21.51%	10.26%	Yakoun Nass Skeena Area 6 Index Area 8 Index Rivers Inlet Smith Inlet
Columbia Upriver Bright	24.37%	15.70%	27.15%	13.26%	Columbia Upriver Bright
WCVI Hatchery	14.77%	15.50%	48.50%	16.75%	NA
Oregon Coastal North Migrating	10.66%	14.71%	35.70%	16.00%	Oregon Coastal
Fraser Early	6.78%	5.97%	30.42%	7.32%	Upper Fraser Middle Fraser Thompson
Mid-Columbia Brights	7.96%	5.57%	33.43%	13.35%	Not Represented
Upper Georgia Strait	4.08%	4.43%	33.78%	19.66%	Upper Georgia Strait
Alaska South SE	3.13%	3.83%	96.45%	35.14%	King Salmon Andrew Creek Blossom Keta Unuk Chickamin
Washington Coastal Wild	2.64%	3.38%	20.00%	10.86%	Grays Harbor Fall Quillayute Fall Hoh Fall Queets Fall
WCVI Wild	1.87%	3.18%	49.41%	16.85%	WCVI
Columbia Upriver Summer	6.22%	3.00%	33.52%	14.37%	Columbia Upriver Summer
WA Coastal Hatchery	2.48%	2.76%	18.58%	10.14%	NA
Willamette River Hatchery	2.22%	2.21%	11.63%	5.14%	NA
Fall Cowlitz Hatchery	0.49%	0.99%	5.44%	2.08%	NA
Lewis River Wild	0.62%	0.81%	17.99%	7.69%	Lewis River
Lower GS Hatchery	0.19%	0.37%	3.57%	1.85%	NA
Lower Georgia Strait	0.18%	0.21%	3.82%	2.03%	Lower Georgia Strait
PS Hatchery Fingerling	0.15%	0.18%	0.45%	0.25%	NA
Fraser Late	0.23%	0.18%	0.37%	0.14%	Harrison
Snake River Fall	0.38%	0.10%	8.65%	5.23%	Not Represented
Skagit Summer/Fall	0.02%	0.09%	3.71%	1.04%	Skagit Summer/Fall
Spring Cowlitz Hatchery	0.03%	0.08%	1.62%	0.83%	NA
Stillaguamish Summer/Fall	0.04%	0.06%	16.99%	6.44%	Stillaguamish
PS Yearling	0.06%	0.05%	0.49%	0.32%	NA
Puget Sound Natural	0.02%	0.05%	0.54%	0.25%	Green, Lake Washington
Snohomish Summer/Fall	0.02%	0.04%	2.65%	1.08%	Snohomish
Nooksack Fall	0.02%	0.04%	0.15%	0.11%	NA
Spring Creek Hatchery	0.00%	0.00%	0.00%	0.00%	NA
Lower Bonneville Hatchery	0.00%	0.00%	0.00%	0.00%	NA
Nooksack Spring	0.00%	0.00%	0.00%	0.00%	Nooksack Spring

1 'NA' denotes a hatchery stock; 'Not represented' denotes a wild stock without an escapement indicator.

Appendix F.2. North BC Troll and Sport

FISHERY:	NORTH TROLL AND SPORT				
	2011	Average (1985-2010)			
Model Stock	% of Fishery Catch	% of Fishery Catch	% of Stock Catch	% of Stock Total Return	Associated Escapement Indicator Stocks
North/Central BC	64.19%	53.70%	70.17%	36.93%	Yakoun Nass Skeena Area 6 Index Area 8 Index Rivers Inlet Smith Inlet
Oregon Coastal North Migrating	4.14%	11.31%	27.28%	13.23%	Oregon Coastal
Columbia Upriver Bright	6.15%	5.82%	10.79%	5.51%	Columbia Upriver Bright
WCVI Hatchery	2.23%	5.02%	15.12%	5.71%	NA
Upper Georgia Strait	5.56%	4.23%	36.50%	21.52%	Upper Georgia Strait
Fraser Early	1.96%	2.85%	16.23%	4.43%	Upper Fraser Middle Fraser Thompson
Willamette River Hatchery	1.69%	2.83%	14.85%	7.16%	NA
Washington Coastal Wild	0.98%	2.47%	14.44%	8.39%	Grays Harbor Fall Quillayute Fall Hoh Fall Queets Fall
WA Coastal Hatchery	0.90%	1.97%	13.68%	7.87%	NA
Columbia Upriver Summer	4.67%	1.91%	24.18%	10.89%	Columbia Upriver Summer
Mid-Columbia Brights	2.01%	1.81%	12.83%	5.43%	Not Represented
WCVI Wild	0.28%	1.10%	15.31%	5.71%	WCVI
Lower GS Hatchery	0.50%	0.88%	9.77%	5.07%	NA
Fall Cowlitz Hatchery	1.25%	0.78%	4.36%	1.79%	NA
Fraser Late	0.86%	0.77%	1.63%	0.66%	Harrison
Lower Georgia Strait	0.50%	0.45%	9.52%	5.24%	Lower Georgia Strait
Nooksack Fall	0.58%	0.41%	2.03%	1.45%	NA
Skagit Summer/Fall	0.26%	0.33%	16.42%	4.70%	Skagit Summer/Fall
PS Hatchery Fingerling	0.34%	0.30%	0.89%	0.49%	NA
Lewis River Wild	0.22%	0.28%	5.79%	2.80%	Lewis River
Spring Cowlitz Hatchery	0.12%	0.21%	4.54%	2.48%	NA
PS Yearling	0.28%	0.17%	2.21%	1.44%	NA
Snohomish Summer/Fall	0.07%	0.17%	11.42%	4.66%	Snohomish
Alaska South SE	0.04%	0.08%	2.41%	0.87%	King Salmon Andrew Creek Blossom Keta Unuk Chickamin
Puget Sound Natural	0.03%	0.07%	0.96%	0.45%	Green Lake Washington
Snake River Fall	0.14%	0.05%	5.97%	3.83%	Not Represented
Stillaguamish Summer/Fall	0.02%	0.04%	10.79%	4.11%	Stillaguamish
Spring Creek Hatchery	0.02%	0.01%	0.06%	0.04%	NA
Nooksack Spring	0.00%	0.00%	1.90%	0.61%	Nooksack Spring
Lower Bonneville Hatchery	0.00%	0.00%	0.00%	0.00%	NA

[1] 'NA' denotes a hatchery stock; 'Not represented' denotes a wild stock without an escapement indicator.

Appendix F.3. Central BC Troll

FISHERY:	CENTRAL TROLL				
	2011	Average (1985-2010)			
Model Stock	% of Fishery Catch	% of Fishery Catch	% of Stock Catch	% of Stock Total Return	Associated Escapement Indicator Stocks
Fraser Late	0.00%	16.44%	1.58%	0.89%	Harrison
WCVI Hatchery	0.00%	14.40%	2.73%	1.13%	NA
Columbia Upriver Bright	0.00%	6.79%	0.69%	0.40%	Columbia Upriver Bright
North/Central BC	0.00%	5.80%	0.76%	0.32%	Yakoun Nass Skeena Area 6 Index Area 8 Index Rivers Inlet Smith Inlet
Upper Georgia Strait	0.00%	4.94%	2.57%	1.65%	Upper Georgia Strait
WCVI Wild	0.00%	3.35%	2.70%	1.12%	WCVI
Columbia Upriver Summer	0.00%	3.20%	2.70%	1.28%	Columbia Upriver Summer
Fraser Early	0.00%	2.88%	0.76%	0.27%	Upper Fraser Middle Fraser Thompson
Washington Coastal Wild	0.00%	2.84%	0.87%	0.57%	Grays Harbor Fall Quillayute Fall Hoh Fall Queets Fall
Lower GS Hatchery	0.00%	2.55%	1.06%	0.73%	NA
WA Coastal Hatchery	0.00%	2.30%	0.82%	0.53%	NA
Mid-Columbia Brights	0.00%	2.27%	0.82%	0.41%	Not Represented
Oregon Coastal North Migrating	0.00%	2.16%	0.28%	0.14%	Oregon Coastal
Lower Bonneville Hatchery	0.00%	1.97%	0.75%	0.38%	NA
Nooksack Fall	0.00%	1.58%	0.28%	0.23%	NA
Lower Georgia Strait	0.00%	1.56%	1.01%	0.72%	Lower Georgia Strait
PS Hatchery Fingerling	0.00%	1.55%	0.19%	0.13%	NA
Skagit Summer/Fall	0.00%	1.09%	1.64%	0.69%	Skagit Summer/Fall
Lewis River Wild	0.00%	0.82%	0.47%	0.26%	Lewis River
Snohomish Summer/Fall	0.00%	0.76%	1.14%	0.71%	Snohomish
Puget Sound Natural	0.00%	0.71%	0.22%	0.14%	Green Lake Washington
PS Yearling	0.00%	0.71%	0.29%	0.23%	NA
Spring Creek Hatchery	0.00%	0.67%	0.08%	0.06%	NA
Willamette River Hatchery	0.00%	0.63%	0.08%	0.05%	NA
Spring Cowlitz Hatchery	0.00%	0.49%	0.15%	0.10%	NA
Fall Cowlitz Hatchery	0.00%	0.49%	0.04%	0.02%	NA
Stillaguamish Summer/Fall	0.00%	0.46%	1.47%	0.73%	Stillaguamish
Snake River Fall	0.00%	0.43%	0.56%	0.41%	Not Represented
Nooksack Spring	0.00%	0.40%	0.59%	0.22%	Nooksack Spring
Alaska South SE	0.00%	0.39%	0.02%	0.01%	King Salmon Andrew Creek Blossom Keta Unuk Chickamin

[1] 'NA' denotes a hatchery stock; 'Not represented' denotes a wild stock without an escapement indicator.

Appendix F.4 WCVI Troll and Outside Sport

FISHERY:	WCVI TROLL AND OUTSIDE SPORT				
	2011	Average (1985-2010)			
Model Stock	% of Fishery Catch	% of Fishery Catch	% of Stock Catch	% of Stock Total Return	Associated Escapement Indicator Stocks
Fraser Late	28.44%	23.15%	22.63%	10.91%	Harrison
PS Hatchery Fingerling	9.38%	11.08%	15.06%	9.29%	NA
Columbia Upriver Bright	7.87%	8.13%	8.54%	4.62%	Columbia Upriver Bright
Spring Creek Hatchery	9.35%	7.10%	13.74%	10.81%	NA
Fall Cowlitz Hatchery	8.47%	6.90%	22.67%	10.45%	NA
Lower Bonneville Hatchery	3.79%	5.50%	30.93%	14.41%	NA
Oregon Coastal North Migrating	2.15%	4.72%	6.90%	3.39%	Oregon Coastal
Nooksack Fall	2.85%	4.57%	10.36%	8.00%	NA
WCVI Hatchery	0.00%	4.05%	6.57%	2.94%	NA
Mid-Columbia Brights	4.21%	3.54%	12.40%	5.59%	Not Represented
Columbia Upriver Summer	5.70%	2.96%	20.74%	9.63%	Columbia Upriver Summer
Puget Sound Natural	1.07%	2.70%	17.15%	9.36%	Green Lake Washington
Washington Coastal Wild	3.08%	2.48%	8.73%	5.00%	Grays Harbor Fall Quillayute Fall Hoh Fall Queets Fall
WA Coastal Hatchery	2.78%	2.14%	8.61%	4.81%	NA
Willamette River Hatchery	2.22%	2.10%	6.29%	3.11%	NA
PS Yearling	1.86%	1.57%	9.73%	7.01%	NA
Fraser Early	2.03%	1.51%	4.24%	1.12%	Upper Fraser Middle Fraser Thompson
WCVI Wild	0.00%	1.02%	6.55%	2.95%	WCVI
Skagit Summer/Fall	0.62%	0.92%	20.53%	6.90%	Skagit Summer/Fall
Lewis River Wild	0.68%	0.79%	10.25%	5.01%	Lewis River
Spring Cowlitz Hatchery	0.33%	0.69%	7.34%	4.67%	NA
North/Central BC	0.42%	0.51%	0.40%	0.19%	Yakoun Nass Skeena Area 6 Index Area 8 Index Rivers Inlet Smith Inlet
Lower GS Hatchery	0.31%	0.48%	2.60%	1.42%	NA
Snohomish Summer/Fall	0.16%	0.47%	14.48%	6.87%	Snohomish
Snake River Fall	1.64%	0.44%	22.02%	14.75%	Not Represented
Lower Georgia Strait	0.42%	0.24%	2.53%	1.46%	Lower Georgia Strait
Upper Georgia Strait	0.12%	0.12%	0.55%	0.33%	Upper Georgia Strait
Stillaguamish Summer/Fall	0.05%	0.11%	15.44%	6.59%	Stillaguamish
Nooksack Spring	0.01%	0.03%	10.89%	3.88%	Nooksack Spring
Alaska South SE	0.00%	0.00%	0.00%	0.00%	King Salmon Andrew Creek Blossom Keta Unuk Chickamin

[1] 'NA' denotes a hatchery stock; 'Not represented' denotes a wild stock without an escapement indicator.

Appendix F.5 Strait of Georgia Sport and Troll

FISHERY:	GS SPORT AND TROLL				
	2011	Average (1985-2010)			
Model Stock	% of Fishery Catch	% of Fishery Catch	% of Stock Catch	% of Stock Total Return	Associated Escapement Indicator Stocks
Oregon Coastal North Migrating	17.40%	22.26%	26.20%	11.37%	Oregon Coastal
Willamette River Hatchery	20.28%	18.92%	44.65%	21.89%	NA
WCVI Hatchery	9.31%	9.55%	14.54%	4.92%	NA
Lower GS Hatchery	3.36%	8.35%	34.34%	19.10%	NA
Columbia Upriver Bright	19.63%	8.06%	5.93%	2.84%	Columbia Upriver Bright
Spring Cowlitz Hatchery	2.39%	5.92%	50.90%	31.03%	NA
Lewis River Wild	8.72%	5.16%	40.11%	22.11%	Lewis River
Fraser Late	0.00%	4.71%	3.45%	2.09%	Harrison
Lower Georgia Strait	3.29%	4.22%	33.37%	19.54%	Lower Georgia Strait
Fall Cowlitz Hatchery	7.71%	3.81%	9.95%	3.91%	NA
North/Central BC	1.45%	2.64%	1.83%	0.83%	Yakoun Nass Skeena Area 6 Index Area 8 Index Rivers Inlet Smith Inlet
WCVI Wild	1.20%	1.86%	14.86%	4.97%	WCVI
Mid-Columbia Brights	1.99%	1.48%	3.71%	1.40%	Not Represented
Nooksack Fall	0.98%	1.20%	2.16%	1.63%	NA
Lower Bonneville Hatchery	0.42%	0.43%	1.98%	0.79%	NA
PS Yearling	0.21%	0.34%	1.89%	1.43%	NA
PS Hatchery Fingerling	0.10%	0.33%	0.44%	0.29%	NA
Columbia Upriver Summer	0.48%	0.30%	1.80%	0.79%	Columbia Upriver Summer
Snake River Fall	1.02%	0.16%	4.50%	2.65%	Not Represented
Puget Sound Natural	0.01%	0.10%	0.47%	0.28%	Green Lake Washington
Skagit Summer/Fall	0.01%	0.07%	1.30%	0.51%	Skagit Summer/Fall
Snohomish Summer/Fall	0.01%	0.04%	0.90%	0.51%	Snohomish
Upper Georgia Strait	0.00%	0.04%	0.18%	0.12%	Upper Georgia Strait
Fraser Early	0.00%	0.03%	0.09%	0.03%	Upper Fraser Middle Fraser Thompson
Nooksack Spring	0.00%	0.02%	4.90%	2.65%	Nooksack Spring
Spring Creek Hatchery	0.01%	0.02%	0.03%	0.02%	NA
WA Coastal Hatchery	0.00%	0.00%	0.00%	0.00%	NA
Alaska South SE	0.00%	0.00%	0.00%	0.00%	King Salmon Andrew Creek Blossom Keta Unuk Chickamin
Stillaguamish Summer/Fall	0.00%	0.00%	0.00%	0.00%	Stillaguamish
Washington Coastal Wild	0.00%	0.00%	0.00%	0.00%	Grays Harbor Fall Quillayute Fall Hoh Fall Queets Fall

[1] 'NA' denotes a hatchery stock; 'Not represented' denotes a wild stock without an escapement indicator.

Appendix F.6 Washington/Oregon Troll and Sport

FISHERY:	WA/OR TROLL AND SPORT				
	2011	Average (1985-2010)			
Model Stock	% of Fishery Catch	% of Fishery Catch	% of Stock Catch	% of Stock Total Return	Associated Escapement Indicator Stocks
Spring Creek Hatchery	28.17%	23.69%	29.80%	23.59%	NA
Fall Cowlitz Hatchery	26.71%	19.17%	40.99%	17.89%	NA
Fraser Late	11.74%	19.15%	11.97%	5.59%	Harrison
Lower Bonneville Hatchery	7.35%	10.50%	40.24%	17.36%	NA
Spring Cowlitz Hatchery	2.37%	4.50%	33.70%	19.33%	NA
PS Hatchery Fingerling	2.77%	4.38%	3.66%	2.16%	NA
Columbia Upriver Bright	6.14%	4.09%	2.75%	1.40%	Columbia Upriver Bright
Oregon Coastal North Migrating	1.93%	2.64%	2.56%	1.16%	Oregon Coastal
Willamette River Hatchery	2.19%	1.93%	3.74%	1.77%	NA
Nooksack Fall	0.84%	1.80%	2.43%	1.83%	NA
Mid-Columbia Brights	1.88%	1.42%	3.20%	1.37%	Not Represented
Lewis River Wild	1.30%	1.41%	13.34%	5.68%	Lewis River
Washington Coastal Wild	0.83%	1.18%	2.34%	1.32%	Grays Harbor Fall Quillayute Fall Hoh Fall Queets Fall
Puget Sound Natural	0.32%	1.06%	4.26%	2.15%	Green Lake Washington
WA Coastal Hatchery	0.75%	1.01%	2.30%	1.28%	NA
Columbia Upriver Summer	1.56%	0.73%	3.12%	1.41%	Columbia Upriver Summer
Snake River Fall	2.47%	0.72%	21.74%	13.98%	Not Represented
PS Yearling	0.27%	0.27%	1.04%	0.71%	NA
Fraser Early	0.32%	0.20%	0.42%	0.10%	Upper Fraser Middle Fraser Thompson
Alaska South SE	0.04%	0.08%	0.75%	0.27%	King Salmon Andrew Creek Blossom Keta Unuk Chickamin
Lower GS Hatchery	0.02%	0.03%	0.14%	0.07%	NA
WCVI Hatchery	0.01%	0.03%	0.04%	0.01%	NA
Lower Georgia Strait	0.02%	0.02%	0.15%	0.08%	Lower Georgia Strait
WCVI Wild	0.00%	0.01%	0.04%	0.01%	WCVI
Skagit Summer/Fall	0.00%	0.00%	0.05%	0.01%	Skagit Summer/Fall
Snohomish Summer/Fall	0.00%	0.00%	0.04%	0.02%	Snohomish
Upper Georgia Strait	0.00%	0.00%	0.00%	0.00%	Upper Georgia Strait
Stillaguamish Summer/Fall	0.00%	0.00%	0.00%	0.00%	Stillaguamish
North/Central BC	0.00%	0.00%	0.00%	0.00%	Yakoun Nass Skeena Area 6 Index Area 8 Index Rivers Inlet Smith Inlet
Nooksack Spring	0.00%	0.00%	0.00%	0.00%	Nooksack Spring

1 'NA' denotes a hatchery stock; 'Not represented' denotes a wild stock without an escapement indicator.

Appendix G Incidental mortality rates applied in the CTC model. Rates in original model were applied to all years. In the current model, rates in some fisheries vary in accordance to changes in management regulations.

		Rates in original Model			Rates applied in Model CLB1209			
Fishery Number	Fishery	Sublegal Rate	Legal Rate	Dropoff	Sublegal Rate	Legal Rate	Dropoff	Applicable Years
1	Alaska T	0.3	0.3	0	0.255	0.211	0.008	All
2	North T	0.3	0.3	0	0.255	0.211	0.017	1979-1995
2	North T				0.220	0.185	0.016	1996-current
3	Centr T	0.3	0.3	0	0.255	0.211	0.017	1979-1995
3	Centr T				0.220	0.185	0.016	1996-current
4	WCVI T	0.3	0.3	0	0.255	0.211	0.017	1979-1997
4	WCVI T				0.220	0.185	0.016	1998-current
5	WA/OR T	0.3	0.3	0	0.255	0.211	0.017	1979-1983
5	WA/OR T				0.220	0.185	0.016	1984-current
6	Geo St T	0.3	0.3	0	0.255	0.211	0.017	1979-1985,1987-1996
6	Geo St T				0.220	0.185	0.016	1986,1998-current
7	Alaska N	0.9	0.9	0	0.9	0.9	0	All
8	North N	0.9	0.9	0	0.9	0.9	0	All
9	Centr N	0.9	0.9	0	0.9	0.9	0	All
10	WCVI N	0.9	0.9	0	0.9	0.9	0	All
11	J De F N	0.9	0.9	0	0.9	0.9	0	All
12	PgtNth N	0.9	0.9	0	0.9	0.9	0	All
13	PgtSth N	0.9	0.9	0	0.9	0.9	0	All
14	WashCst N	0.9	0.9	0	0.9	0.9	0	All
15	Col R N	0.9	0.9	0	0.9	0.9	0	All
16	JohnSt N	0.9	0.9	0	0.9	0.9	0	All
17	Fraser N	0.9	0.9	0	0.9	0.9	0	All
18	Alaska S	0.3	0.3	0	0.123	0.123	0.036	All
19	Nor/Cen S	0.3	0.3	0	0.123	0.123	0.036	All
20	WCVI S	0.3	0.3	0	0.123	0.123	0.069	All
21	WashOcn S	0.3	0.3	0	0.123	0.123	0.069	All
22	PgtNth S	0.3	0.3	0	0.123	0.123	0.145	All
23	PgtSth S	0.3	0.3	0	0.123	0.123	0.145	All
24	Geo St S	0.3	0.3	0	0.322	0.322	0.069	1979-1981
24	Geo St S				0.123	0.123	0.069	1982-current
25	Col R S	0.3	0.3	0	0.123	0.123	0.069	All

Appendix H Time series of abundance indices from 1979 to 2012 for SEAK, NBC, and WCVI AABM fisheries as estimated by CTC Chinook Model calibration CLB1209.

This time series is NOT the first postseason AI and is for trend analysis only (Figures 3.10-3.12). For evaluation of overage and underage, use the first postseason AI in Table 3-3 instead. (Source 1209PABD).

Year	SEAK	NBC	WCVI
1979	0.96	1.03	1.11
1980	1.02	0.97	0.96
1981	0.92	0.94	0.93
1982	1.10	1.06	1.00
1983	1.29	1.21	0.93
1984	1.45	1.37	0.99
1985	1.31	1.29	0.97
1986	1.49	1.46	1.02
1987	1.73	1.72	1.19
1988	2.12	1.83	1.14
1989	1.84	1.66	0.99
1990	1.87	1.63	0.90
1991	1.79	1.52	0.76
1992	1.67	1.40	0.79
1993	1.66	1.41	0.70
1994	1.56	1.23	0.53
1995	1.05	0.96	0.41
1996	0.93	0.92	0.50
1997	1.23	1.10	0.60
1998	1.19	1.00	0.57
1999	1.09	0.95	0.51
2000	0.97	0.93	0.52
2001	1.16	1.20	0.80
2002	1.73	1.68	1.16
2003	2.18	1.90	1.22
2004	2.04	1.78	1.02
2005	1.80	1.54	0.83
2006	1.51	1.23	0.65
2007	1.15	0.92	0.52
2008	0.88	0.80	0.56
2009	1.04	0.95	0.56
2010	1.16	1.13	0.80
2011	1.62	1.41	0.90
2012	1.52	1.32	0.89

Appendix I Abundance indices in total and by model stock for AABM fisheries, from Calibration 1209.

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Table I.1. Abundance indices (AIs) for the Southeast Alaska troll fishery by model stock and year (stock groups 1-15 this page; 16-30 on following page), from CLB 1209. Numbers shown represent the portion of the AI total estimated for each model stock; the summation across all 30 stock groups equals the AI total for each calendar year. 243

Table I.2. Abundance indices (AIs) for the Northern BC troll fishery by stock and year (stock groups 1-15 this page; 16-30 on following page), from CLB 1209. Numbers shown represent the portion of the AI total estimated for each model stock; the summation across all 30 stock groups equals the AI total for each calendar year. 245

Table I.3. Abundance indices (AIs) for the WCVI troll fishery by stock and year 247

Table I.1. Abundance indices (AIs) for the Southeast Alaska troll fishery by model stock and year (stock groups 1-15 this page; 16-30 on following page), from CLB 1209. Numbers shown represent the portion of the AI total estimated for each model stock; the summation across all 30 stock groups equals the AI total for each calendar year.

Year	Alaska South SE	North / Centr	Fraser Early	Fraser Late	WCVI Hatchery	WCVI Natural	Georgia St. Upper	Georgia St. Lwr Nat	Georgia St. Lwr Hat	Nooksack Fall	Pgt Sd Fing	Pgt Sd NatF	Pgt Sd Year	Nooksack Spring	Skagit Wild	AI Total
1979	0.03	0.12	0.06	0.00	0.05	0.07	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
1980	0.03	0.13	0.05	0.00	0.10	0.15	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02
1981	0.04	0.13	0.04	0.00	0.08	0.11	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92
1982	0.04	0.14	0.04	0.00	0.19	0.21	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10
1983	0.05	0.16	0.04	0.00	0.31	0.15	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.29
1984	0.06	0.18	0.05	0.00	0.29	0.10	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.45
1985	0.06	0.20	0.07	0.00	0.15	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.31
1986	0.07	0.22	0.07	0.00	0.12	0.04	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.49
1987	0.07	0.23	0.07	0.00	0.09	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
1988	0.06	0.24	0.07	0.00	0.21	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.12
1989	0.04	0.25	0.06	0.00	0.31	0.07	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.84
1990	0.03	0.26	0.06	0.00	0.47	0.10	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87
1991	0.03	0.27	0.06	0.00	0.59	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.79
1992	0.03	0.26	0.06	0.00	0.55	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.67
1993	0.04	0.24	0.06	0.00	0.51	0.13	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.66
1994	0.03	0.22	0.07	0.00	0.42	0.11	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
1995	0.03	0.23	0.07	0.00	0.15	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.05
1996	0.03	0.23	0.08	0.00	0.05	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93
1997	0.03	0.23	0.09	0.00	0.17	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.23
1998	0.03	0.23	0.08	0.00	0.27	0.07	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.19
1999	0.04	0.24	0.07	0.00	0.14	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.09
2000	0.05	0.25	0.06	0.00	0.05	0.01	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97
2001	0.05	0.25	0.08	0.00	0.07	0.01	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
2002	0.04	0.25	0.10	0.00	0.23	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
2003	0.04	0.24	0.10	0.00	0.36	0.04	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.18
2004	0.04	0.25	0.09	0.00	0.36	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.04
2005	0.04	0.24	0.09	0.00	0.26	0.02	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.80
2006	0.05	0.22	0.10	0.00	0.23	0.03	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.51
2007	0.05	0.21	0.08	0.00	0.24	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.15
2008	0.03	0.19	0.08	0.00	0.12	0.01	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
2009	0.03	0.18	0.08	0.00	0.10	0.01	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04
2010	0.04	0.17	0.10	0.00	0.11	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
2011	0.04	0.16	0.10	0.00	0.24	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.62
2012	0.04	0.15	0.10	0.00	0.12	0.01	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.52
Average	0.04	0.21	0.07	0.00	0.23	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.41

-continued-

Table I.1. Page 2 of 2 (stock groups 16-30).

Year	Stillaguamish Wild	Snohomish Wild	WA Coastal Hat	UpRiver Brights	Spring Creek Hat	Lwr Bonneville Hat	Fall Cowlitz Hat	Lewis R Wild	Willamette R Hat	Spr Cowlitz Hat	Col R Summer	Oregon Coast	WA Coastal Wild	Lyons Ferry	Mid Col R Brights	AI Total
1979	0.00	0.00	0.03	0.18	0.00	0.00	0.03	0.02	0.02	0.00	0.04	0.23	0.03	0.00	0.00	0.96
1980	0.00	0.00	0.03	0.14	0.00	0.00	0.03	0.02	0.03	0.00	0.04	0.17	0.04	0.00	0.00	1.02
1981	0.00	0.00	0.02	0.10	0.00	0.00	0.03	0.02	0.03	0.01	0.03	0.16	0.04	0.00	0.01	0.92
1982	0.00	0.00	0.02	0.06	0.00	0.00	0.03	0.01	0.03	0.00	0.02	0.20	0.03	0.00	0.01	1.10
1983	0.00	0.00	0.02	0.09	0.00	0.00	0.03	0.01	0.04	0.00	0.03	0.25	0.03	0.00	0.02	1.29
1984	0.00	0.00	0.02	0.20	0.00	0.00	0.03	0.01	0.04	0.00	0.03	0.35	0.03	0.00	0.02	1.45
1985	0.00	0.00	0.02	0.23	0.00	0.00	0.03	0.01	0.03	0.00	0.02	0.33	0.04	0.00	0.01	1.31
1986	0.00	0.00	0.02	0.34	0.00	0.00	0.03	0.01	0.04	0.00	0.03	0.36	0.05	0.00	0.02	1.49
1987	0.00	0.00	0.04	0.48	0.00	0.00	0.03	0.02	0.05	0.01	0.03	0.40	0.06	0.00	0.07	1.73
1988	0.00	0.00	0.05	0.51	0.00	0.00	0.14	0.04	0.06	0.00	0.03	0.38	0.07	0.00	0.13	2.12
1989	0.00	0.00	0.06	0.32	0.00	0.00	0.05	0.04	0.06	0.00	0.03	0.30	0.08	0.00	0.12	1.84
1990	0.00	0.00	0.05	0.24	0.00	0.00	0.02	0.02	0.07	0.00	0.02	0.31	0.07	0.00	0.08	1.87
1991	0.00	0.00	0.05	0.13	0.00	0.00	0.01	0.01	0.05	0.00	0.02	0.29	0.06	0.00	0.05	1.79
1992	0.00	0.00	0.05	0.10	0.00	0.00	0.02	0.01	0.03	0.00	0.02	0.26	0.05	0.00	0.04	1.67
1993	0.00	0.00	0.05	0.18	0.00	0.00	0.01	0.01	0.03	0.00	0.02	0.25	0.05	0.00	0.05	1.66
1994	0.00	0.00	0.05	0.21	0.00	0.00	0.01	0.01	0.02	0.00	0.02	0.27	0.05	0.00	0.05	1.56
1995	0.00	0.00	0.04	0.12	0.00	0.00	0.01	0.01	0.02	0.00	0.01	0.21	0.04	0.00	0.04	1.05
1996	0.00	0.00	0.04	0.13	0.00	0.00	0.02	0.01	0.02	0.00	0.02	0.17	0.04	0.00	0.05	0.93
1997	0.00	0.00	0.03	0.18	0.00	0.00	0.01	0.01	0.02	0.00	0.02	0.20	0.04	0.00	0.09	1.23
1998	0.00	0.00	0.02	0.12	0.00	0.00	0.00	0.01	0.02	0.00	0.02	0.16	0.04	0.00	0.06	1.19
1999	0.00	0.00	0.02	0.21	0.00	0.00	0.01	0.00	0.02	0.00	0.02	0.16	0.03	0.00	0.06	1.09
2000	0.00	0.00	0.02	0.18	0.00	0.00	0.01	0.01	0.03	0.00	0.04	0.13	0.03	0.00	0.05	0.97
2001	0.00	0.00	0.02	0.20	0.00	0.00	0.01	0.01	0.03	0.00	0.07	0.19	0.03	0.00	0.07	1.16
2002	0.00	0.00	0.03	0.31	0.00	0.00	0.02	0.02	0.07	0.00	0.10	0.27	0.03	0.00	0.16	1.73
2003	0.00	0.00	0.03	0.45	0.00	0.00	0.05	0.02	0.05	0.00	0.10	0.36	0.04	0.00	0.22	2.18
2004	0.00	0.00	0.04	0.37	0.00	0.00	0.03	0.02	0.06	0.00	0.09	0.39	0.04	0.00	0.16	2.04
2005	0.00	0.00	0.04	0.37	0.00	0.00	0.03	0.01	0.02	0.00	0.09	0.32	0.04	0.00	0.13	1.80
2006	0.00	0.00	0.04	0.26	0.00	0.00	0.02	0.02	0.03	0.00	0.08	0.20	0.04	0.00	0.11	1.51
2007	0.00	0.00	0.03	0.12	0.00	0.00	0.01	0.00	0.01	0.00	0.07	0.12	0.03	0.00	0.08	1.15
2008	0.00	0.00	0.03	0.13	0.00	0.00	0.00	0.00	0.02	0.00	0.06	0.05	0.03	0.00	0.09	0.88
2009	0.00	0.00	0.03	0.22	0.00	0.00	0.02	0.01	0.02	0.00	0.08	0.08	0.03	0.00	0.11	1.04
2010	0.00	0.00	0.03	0.23	0.00	0.00	0.02	0.01	0.05	0.00	0.09	0.12	0.03	0.00	0.09	1.16
2011	0.00	0.00	0.03	0.41	0.00	0.00	0.04	0.01	0.04	0.00	0.11	0.19	0.04	0.01	0.13	1.62
2012	0.00	0.00	0.04	0.40	0.00	0.00	0.03	0.01	0.05	0.00	0.12	0.19	0.04	0.01	0.13	1.52
Average	0.00	0.00	0.03	0.23	0.00	0.00	0.03	0.01	0.04	0.00	0.05	0.24	0.04	0.00	0.07	1.41

Table I.2. Abundance indices (AIs) for the Northern BC troll fishery by stock and year (stock groups 1-15 this page; 16-30 on following page), from CLB 1209. Numbers shown represent the portion of the AI total estimated for each model stock; the summation across all 30 stock groups equals the AI total for each calendar year.

Year	Alaska South SE	North/Centr	Fraser Early	Fraser Late	WCVI Hatchery	WCVI Natural	Georgia St. Upper	Georgia St. Lwr Nat	Georgia St. Lwr Hat	Nooksack Fall	Pgt Sd Fing	Pgt Sd NatF	Pgt Sd Year	Nooksack Spring	Skagit Wild	AI Total
1979	0.00	0.08	0.07	0.01	0.04	0.05	0.06	0.02	0.02	0.01	0.00	0.00	0.00	0.02	0.01	1.03
1980	0.00	0.08	0.06	0.01	0.05	0.07	0.05	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.01	0.97
1981	0.00	0.09	0.05	0.01	0.06	0.08	0.06	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.01	0.94
1982	0.00	0.10	0.04	0.01	0.12	0.11	0.05	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.01	1.06
1983	0.00	0.11	0.05	0.01	0.17	0.08	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.01	1.21
1984	0.00	0.12	0.06	0.02	0.15	0.05	0.05	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.01	1.37
1985	0.00	0.13	0.07	0.01	0.08	0.03	0.06	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.01	1.29
1986	0.00	0.14	0.09	0.01	0.06	0.02	0.06	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.01	1.46
1987	0.00	0.15	0.08	0.01	0.07	0.02	0.07	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.72
1988	0.00	0.16	0.08	0.01	0.12	0.03	0.05	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	1.83
1989	0.00	0.17	0.08	0.01	0.19	0.04	0.06	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.66
1990	0.00	0.17	0.08	0.01	0.27	0.06	0.05	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.63
1991	0.00	0.17	0.08	0.01	0.32	0.07	0.05	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.52
1992	0.00	0.17	0.07	0.01	0.30	0.07	0.03	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.40
1993	0.00	0.16	0.07	0.01	0.28	0.07	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.41
1994	0.00	0.16	0.08	0.00	0.20	0.05	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.23
1995	0.00	0.15	0.08	0.00	0.07	0.02	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.96
1996	0.00	0.15	0.09	0.01	0.04	0.01	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.92
1997	0.00	0.16	0.11	0.01	0.11	0.03	0.03	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.10
1998	0.00	0.16	0.10	0.01	0.13	0.03	0.04	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.00
1999	0.00	0.16	0.09	0.01	0.07	0.01	0.05	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.95
2000	0.00	0.16	0.08	0.01	0.03	0.00	0.06	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.93
2001	0.00	0.17	0.09	0.01	0.06	0.01	0.07	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	1.20
2002	0.00	0.17	0.11	0.01	0.14	0.02	0.07	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.68
2003	0.00	0.17	0.12	0.01	0.19	0.02	0.08	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	1.90
2004	0.00	0.18	0.11	0.01	0.20	0.02	0.08	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.01	1.78
2005	0.00	0.17	0.10	0.01	0.14	0.01	0.08	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	1.54
2006	0.00	0.16	0.11	0.01	0.14	0.02	0.08	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.01	1.23
2007	0.00	0.15	0.10	0.00	0.11	0.01	0.06	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.92
2008	0.00	0.13	0.10	0.00	0.07	0.01	0.05	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.80
2009	0.00	0.12	0.10	0.00	0.05	0.01	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.95
2010	0.00	0.12	0.11	0.01	0.08	0.01	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13
2011	0.00	0.12	0.12	0.01	0.12	0.01	0.06	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.41
2012	0.00	0.11	0.12	0.01	0.06	0.01	0.07	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.32
Average	0.00	0.14	0.09	0.01	0.13	0.03	0.05	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	1.28

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Table I.2. Page 2 of 2 (stock groups 16-30).

Year	Stillaguamish Wild	Snohomish Wild	WA Coastal Hat	UpRiver Brights	Spring Creek Hat	Lwr Bonneville Hat	Fall Cowlitz Hat	Lewis R Wild	Willamette R Hat	Spr Cowlitz Hat	Col R Summer	Oregon Coast	WA Coastal Wild	Lyons Ferry	Mid Col R Brights	AI Total
1979	0.00	0.01	0.04	0.12	0.00	0.00	0.02	0.01	0.06	0.01	0.02	0.30	0.05	0.00	0.00	1.03
1980	0.00	0.01	0.04	0.09	0.00	0.00	0.02	0.01	0.06	0.01	0.02	0.25	0.06	0.00	0.00	0.97
1981	0.00	0.00	0.04	0.06	0.00	0.00	0.02	0.01	0.07	0.01	0.02	0.24	0.06	0.00	0.01	0.94
1982	0.00	0.00	0.03	0.04	0.00	0.00	0.02	0.01	0.08	0.01	0.02	0.30	0.06	0.00	0.01	1.06
1983	0.00	0.00	0.03	0.07	0.00	0.00	0.02	0.01	0.09	0.01	0.02	0.39	0.06	0.00	0.02	1.21
1984	0.00	0.00	0.03	0.14	0.00	0.00	0.02	0.01	0.09	0.01	0.02	0.49	0.06	0.00	0.01	1.37
1985	0.00	0.00	0.03	0.16	0.00	0.00	0.02	0.01	0.08	0.00	0.02	0.46	0.06	0.00	0.01	1.29
1986	0.00	0.00	0.05	0.24	0.00	0.00	0.02	0.01	0.10	0.01	0.02	0.49	0.08	0.00	0.02	1.46
1987	0.00	0.00	0.07	0.33	0.00	0.00	0.03	0.02	0.13	0.01	0.02	0.53	0.10	0.00	0.05	1.72
1988	0.00	0.00	0.09	0.32	0.00	0.00	0.08	0.02	0.14	0.01	0.02	0.47	0.12	0.00	0.09	1.83
1989	0.00	0.00	0.09	0.20	0.00	0.00	0.02	0.01	0.14	0.01	0.02	0.40	0.12	0.00	0.07	1.66
1990	0.00	0.00	0.08	0.15	0.00	0.00	0.01	0.01	0.14	0.00	0.01	0.39	0.11	0.00	0.05	1.63
1991	0.00	0.00	0.08	0.08	0.00	0.00	0.01	0.01	0.10	0.00	0.01	0.37	0.10	0.00	0.03	1.52
1992	0.00	0.00	0.09	0.07	0.00	0.00	0.01	0.01	0.07	0.01	0.01	0.34	0.09	0.00	0.03	1.40
1993	0.00	0.00	0.08	0.12	0.00	0.00	0.01	0.00	0.06	0.00	0.01	0.36	0.08	0.00	0.03	1.41
1994	0.00	0.00	0.07	0.13	0.00	0.00	0.00	0.01	0.05	0.00	0.01	0.32	0.07	0.00	0.03	1.23
1995	0.00	0.00	0.07	0.08	0.00	0.00	0.01	0.01	0.04	0.00	0.01	0.29	0.07	0.00	0.03	0.96
1996	0.00	0.00	0.06	0.09	0.00	0.00	0.01	0.01	0.04	0.00	0.01	0.24	0.07	0.00	0.04	0.92
1997	0.00	0.00	0.05	0.12	0.00	0.00	0.01	0.00	0.05	0.00	0.01	0.26	0.07	0.00	0.06	1.10
1998	0.00	0.00	0.03	0.08	0.00	0.00	0.00	0.00	0.05	0.00	0.02	0.22	0.05	0.00	0.04	1.00
1999	0.00	0.00	0.03	0.14	0.00	0.00	0.01	0.00	0.06	0.00	0.02	0.19	0.04	0.00	0.04	0.95
2000	0.00	0.00	0.03	0.11	0.00	0.00	0.00	0.00	0.07	0.00	0.04	0.23	0.04	0.00	0.03	0.93
2001	0.00	0.00	0.03	0.15	0.00	0.00	0.01	0.01	0.11	0.00	0.05	0.30	0.04	0.00	0.05	1.20
2002	0.00	0.00	0.04	0.22	0.00	0.00	0.02	0.01	0.15	0.00	0.06	0.44	0.05	0.00	0.11	1.68
2003	0.00	0.00	0.05	0.29	0.00	0.00	0.03	0.01	0.13	0.01	0.06	0.51	0.06	0.00	0.14	1.90
2004	0.00	0.00	0.06	0.24	0.00	0.00	0.01	0.01	0.10	0.01	0.06	0.49	0.07	0.00	0.10	1.78
2005	0.00	0.00	0.06	0.24	0.00	0.00	0.02	0.01	0.06	0.00	0.05	0.39	0.07	0.00	0.08	1.54
2006	0.00	0.00	0.06	0.16	0.00	0.00	0.01	0.00	0.05	0.01	0.05	0.23	0.06	0.00	0.07	1.23
2007	0.00	0.00	0.05	0.08	0.00	0.00	0.00	0.00	0.03	0.00	0.05	0.13	0.05	0.00	0.05	0.92
2008	0.00	0.00	0.04	0.10	0.00	0.00	0.00	0.00	0.04	0.00	0.05	0.08	0.04	0.00	0.06	0.80
2009	0.00	0.00	0.05	0.15	0.00	0.00	0.01	0.00	0.08	0.00	0.05	0.13	0.05	0.00	0.07	0.95
2010	0.00	0.00	0.05	0.17	0.00	0.00	0.01	0.00	0.10	0.00	0.06	0.20	0.05	0.01	0.06	1.13
2011	0.00	0.00	0.06	0.27	0.00	0.00	0.02	0.01	0.10	0.00	0.07	0.25	0.06	0.01	0.09	1.41
2012	0.00	0.00	0.06	0.26	0.00	0.00	0.02	0.01	0.11	0.00	0.08	0.23	0.07	0.01	0.09	1.32
Average	0.00	0.00	0.05	0.15	0.00	0.00	0.02	0.01	0.08	0.00	0.03	0.32	0.07	0.00	0.05	1.28

Table I.3. Abundance indices (AIs) for the WCVI troll fishery by stock and year stock groups 1-15 this page; 16-30 on following page), from CLB 1209. Numbers shown represent the portion of the AI total estimated for each model stock; the summation across all 30 stock groups equals the AI total for each calendar year.

Year	Alaska South SE	North/Centr	Fraser Early	Fraser Late	WCVI Hatchery	WCVI Natural	Georgia St. Upper	Georgia St. Lwr Nat	Georgia St. Lwr Hat	Nooksack Fall	Pgt Sd Fing	Pgt Sd Natf	Pgt Sd Year	Nooksack Spring	Skagit Wild	AI Total
1979	0.00	0.00	0.01	0.27	0.01	0.02	0.00	0.01	0.01	0.08	0.05	0.03	0.03	0.00	0.02	1.11
1980	0.00	0.00	0.01	0.20	0.02	0.02	0.00	0.01	0.01	0.09	0.05	0.02	0.03	0.00	0.02	0.96
1981	0.00	0.00	0.00	0.23	0.02	0.03	0.00	0.00	0.01	0.09	0.05	0.02	0.03	0.00	0.02	0.93
1982	0.00	0.00	0.00	0.25	0.04	0.03	0.00	0.00	0.00	0.09	0.05	0.02	0.02	0.00	0.01	1.00
1983	0.00	0.00	0.01	0.22	0.05	0.02	0.00	0.00	0.00	0.10	0.06	0.03	0.02	0.00	0.01	0.93
1984	0.00	0.00	0.01	0.24	0.04	0.01	0.00	0.00	0.01	0.12	0.06	0.02	0.02	0.00	0.02	0.99
1985	0.00	0.00	0.01	0.28	0.03	0.01	0.00	0.00	0.01	0.11	0.06	0.02	0.01	0.00	0.01	0.97
1986	0.00	0.00	0.01	0.22	0.02	0.01	0.00	0.00	0.00	0.09	0.06	0.02	0.01	0.00	0.01	1.02
1987	0.00	0.00	0.01	0.11	0.02	0.01	0.00	0.00	0.00	0.06	0.08	0.03	0.01	0.00	0.01	1.19
1988	0.00	0.00	0.01	0.07	0.04	0.01	0.00	0.00	0.00	0.05	0.09	0.03	0.01	0.00	0.01	1.14
1989	0.00	0.00	0.01	0.18	0.06	0.01	0.00	0.00	0.00	0.07	0.10	0.03	0.02	0.00	0.01	0.99
1990	0.00	0.00	0.01	0.21	0.09	0.02	0.00	0.00	0.00	0.07	0.09	0.03	0.01	0.00	0.01	0.90
1991	0.00	0.00	0.01	0.16	0.09	0.02	0.00	0.00	0.00	0.05	0.07	0.03	0.01	0.00	0.00	0.76
1992	0.00	0.00	0.01	0.21	0.09	0.02	0.00	0.00	0.00	0.03	0.06	0.02	0.01	0.00	0.00	0.79
1993	0.00	0.00	0.01	0.17	0.08	0.02	0.00	0.00	0.00	0.03	0.06	0.02	0.01	0.00	0.00	0.70
1994	0.00	0.00	0.01	0.09	0.05	0.01	0.00	0.00	0.00	0.02	0.07	0.02	0.01	0.00	0.00	0.53
1995	0.00	0.00	0.01	0.05	0.01	0.00	0.00	0.00	0.00	0.02	0.08	0.02	0.01	0.00	0.00	0.41
1996	0.00	0.00	0.01	0.07	0.02	0.00	0.00	0.00	0.00	0.02	0.07	0.02	0.01	0.00	0.00	0.50
1997	0.00	0.00	0.01	0.17	0.04	0.01	0.00	0.00	0.00	0.03	0.07	0.02	0.01	0.00	0.01	0.60
1998	0.00	0.00	0.01	0.18	0.04	0.01	0.00	0.00	0.00	0.02	0.07	0.02	0.01	0.00	0.00	0.57
1999	0.00	0.00	0.01	0.11	0.01	0.00	0.00	0.00	0.00	0.03	0.08	0.02	0.01	0.00	0.01	0.51
2000	0.00	0.00	0.01	0.12	0.01	0.00	0.00	0.00	0.00	0.03	0.08	0.02	0.01	0.00	0.01	0.52
2001	0.00	0.00	0.01	0.11	0.02	0.00	0.00	0.00	0.00	0.04	0.09	0.03	0.01	0.00	0.01	0.80
2002	0.00	0.00	0.01	0.19	0.05	0.01	0.00	0.00	0.00	0.04	0.09	0.02	0.01	0.00	0.01	1.16
2003	0.00	0.00	0.01	0.23	0.06	0.01	0.00	0.00	0.00	0.02	0.09	0.02	0.01	0.00	0.01	1.22
2004	0.00	0.00	0.01	0.15	0.05	0.00	0.00	0.00	0.00	0.02	0.09	0.02	0.02	0.00	0.01	1.02
2005	0.00	0.00	0.01	0.09	0.04	0.00	0.00	0.00	0.00	0.02	0.10	0.02	0.02	0.00	0.01	0.83
2006	0.00	0.00	0.01	0.10	0.04	0.01	0.00	0.00	0.00	0.02	0.11	0.02	0.02	0.00	0.01	0.65
2007	0.00	0.00	0.01	0.07	0.03	0.00	0.00	0.00	0.00	0.02	0.12	0.02	0.03	0.00	0.01	0.52
2008	0.00	0.00	0.01	0.08	0.02	0.00	0.00	0.00	0.00	0.02	0.09	0.02	0.02	0.00	0.01	0.56
2009	0.00	0.00	0.01	0.06	0.02	0.00	0.00	0.00	0.00	0.02	0.08	0.01	0.02	0.00	0.00	0.56
2010	0.00	0.00	0.01	0.14	0.03	0.00	0.00	0.00	0.00	0.02	0.08	0.01	0.02	0.00	0.00	0.80
2011	0.00	0.00	0.01	0.14	0.03	0.00	0.00	0.00	0.00	0.03	0.09	0.01	0.02	0.00	0.00	0.90
2012	0.00	0.00	0.01	0.10	0.01	0.00	0.00	0.00	0.00	0.03	0.10	0.01	0.02	0.00	0.01	0.89
Average	0.00	0.00	0.01	0.15	0.04	0.01	0.00	0.00	0.00	0.05	0.08	0.02	0.01	0.00	0.01	0.82

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Table I.3 . Page 2 of 2 (stock groups 16-30).

Year	Stillaguamish Wild	Snohomish Wild	WA Coastal Hat	UpRiver Brights	Spring Creek Hat	Lwr Bonneville Hat	Fall Cowlitz Hat	Lewis R Wild	Willamette R Hat	Spr Cowlitz Hat	Col R Summer	Oregon Coast	WA Coastal Wild	Lyons Ferry	Mid Col R Brights	AI Total
1979	0.00	0.01	0.01	0.06	0.17	0.13	0.09	0.01	0.01	0.01	0.02	0.04	0.01	0.00	0.00	1.11
1980	0.00	0.01	0.01	0.04	0.14	0.10	0.08	0.01	0.01	0.02	0.02	0.04	0.01	0.00	0.00	0.96
1981	0.00	0.01	0.01	0.03	0.12	0.09	0.07	0.01	0.02	0.01	0.02	0.04	0.01	0.00	0.00	0.93
1982	0.00	0.01	0.01	0.03	0.13	0.10	0.09	0.01	0.02	0.01	0.01	0.04	0.01	0.00	0.01	1.00
1983	0.00	0.01	0.01	0.05	0.04	0.09	0.08	0.01	0.02	0.01	0.02	0.06	0.01	0.00	0.01	0.93
1984	0.00	0.01	0.01	0.07	0.05	0.08	0.07	0.01	0.02	0.01	0.02	0.07	0.01	0.00	0.00	0.99
1985	0.00	0.01	0.01	0.10	0.03	0.07	0.08	0.01	0.02	0.01	0.01	0.07	0.01	0.00	0.00	0.97
1986	0.00	0.00	0.01	0.15	0.02	0.12	0.09	0.01	0.02	0.01	0.02	0.07	0.02	0.00	0.01	1.02
1987	0.00	0.00	0.02	0.18	0.01	0.25	0.18	0.02	0.03	0.01	0.02	0.07	0.02	0.00	0.04	1.19
1988	0.00	0.00	0.02	0.14	0.03	0.12	0.27	0.02	0.03	0.01	0.02	0.07	0.03	0.00	0.04	1.14
1989	0.00	0.00	0.02	0.09	0.04	0.05	0.13	0.01	0.03	0.01	0.01	0.06	0.03	0.00	0.03	0.99
1990	0.00	0.00	0.02	0.06	0.04	0.03	0.06	0.01	0.03	0.01	0.01	0.06	0.02	0.00	0.02	0.90
1991	0.00	0.00	0.02	0.04	0.05	0.05	0.04	0.01	0.02	0.01	0.01	0.05	0.02	0.00	0.01	0.76
1992	0.00	0.00	0.02	0.05	0.04	0.06	0.05	0.01	0.01	0.01	0.01	0.05	0.02	0.00	0.01	0.79
1993	0.00	0.00	0.02	0.06	0.02	0.03	0.04	0.00	0.01	0.00	0.01	0.05	0.02	0.00	0.02	0.70
1994	0.00	0.00	0.01	0.05	0.02	0.02	0.02	0.01	0.01	0.00	0.01	0.05	0.01	0.00	0.01	0.53
1995	0.00	0.00	0.01	0.04	0.02	0.02	0.03	0.00	0.01	0.00	0.01	0.04	0.01	0.00	0.01	0.41
1996	0.00	0.00	0.01	0.06	0.03	0.02	0.04	0.00	0.01	0.00	0.01	0.04	0.01	0.00	0.02	0.50
1997	0.00	0.00	0.01	0.05	0.02	0.02	0.03	0.00	0.01	0.00	0.01	0.03	0.01	0.00	0.03	0.60
1998	0.00	0.00	0.01	0.05	0.02	0.02	0.02	0.00	0.01	0.00	0.01	0.03	0.01	0.00	0.02	0.57
1999	0.00	0.00	0.01	0.07	0.03	0.01	0.02	0.00	0.01	0.00	0.01	0.03	0.01	0.00	0.02	0.51
2000	0.00	0.00	0.01	0.06	0.02	0.02	0.02	0.01	0.01	0.00	0.03	0.03	0.01	0.00	0.02	0.52
2001	0.00	0.00	0.01	0.09	0.10	0.06	0.04	0.01	0.03	0.00	0.04	0.05	0.01	0.01	0.04	0.80
2002	0.00	0.00	0.01	0.13	0.18	0.07	0.07	0.01	0.03	0.01	0.06	0.07	0.01	0.01	0.06	1.16
2003	0.00	0.00	0.01	0.13	0.18	0.06	0.11	0.01	0.03	0.01	0.05	0.08	0.01	0.01	0.06	1.22
2004	0.00	0.00	0.01	0.12	0.17	0.04	0.08	0.01	0.02	0.01	0.05	0.07	0.01	0.01	0.05	1.02
2005	0.00	0.00	0.01	0.11	0.10	0.02	0.08	0.01	0.01	0.01	0.05	0.05	0.01	0.01	0.04	0.83
2006	0.00	0.00	0.01	0.07	0.03	0.01	0.04	0.00	0.01	0.01	0.05	0.03	0.01	0.01	0.03	0.65
2007	0.00	0.00	0.01	0.04	0.02	0.01	0.02	0.00	0.01	0.00	0.04	0.02	0.01	0.01	0.03	0.52
2008	0.00	0.00	0.01	0.07	0.06	0.02	0.02	0.00	0.01	0.00	0.04	0.01	0.01	0.01	0.03	0.56
2009	0.00	0.00	0.01	0.08	0.04	0.01	0.04	0.00	0.02	0.00	0.05	0.02	0.01	0.01	0.03	0.56
2010	0.00	0.00	0.01	0.11	0.10	0.02	0.06	0.00	0.02	0.00	0.05	0.03	0.01	0.01	0.04	0.80
2011	0.00	0.00	0.01	0.14	0.08	0.03	0.09	0.01	0.02	0.00	0.06	0.04	0.01	0.02	0.04	0.90
2012	0.00	0.00	0.01	0.14	0.08	0.07	0.08	0.01	0.02	0.00	0.07	0.03	0.01	0.02	0.05	0.89
Average	0.00	0.00	0.01	0.08	0.06	0.06	0.07	0.01	0.02	0.01	0.03	0.05	0.01	0.00	0.02	0.82

Appendix J Fishery exploitation rate indices by stock, age and fishery, based on CWT data, 1975–2009.

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Table J.1. Alaska troll Stratified Proportion Fishery Index (SPFI) values as landed catch, based on CWT data.

YEAR	SPFI	WIN/SPR	JUNE IN	JUNE OUT	JULY IN	JULY OUT	FALL
1979	0.8217	1.1327	0.5079	1.0756	0.3919	0.7931	0.7931
1980	1.2859	0.6394	1.4575	0.9441	1.8553	1.5482	1.5482
1981	1.0973	1.2229	0.9157	1.0658	0.8571	1.0523	1.0523
1982	0.7951	1.0051	1.1189	0.9144	0.8957	0.6065	0.6065
1983	0.8692	1.0500	0.6848	0.6091	0.7926	1.2132	1.2132
1984	0.6142	0.3622	1.1702	0.9501	0.2709	0.5149	0.5149
1985	0.6709	0.4405	0.9098	0.6052	0.6927	0.8081	0.8081
1986	0.4743	0.4242	0.4404	0.1753	0.5219	1.1742	1.1742
1987	0.5001	0.5858	0.6023	0.1879	1.2764	0.6490	0.6490
1988	0.4158	1.3603	0.1451	0.0015	1.1380	0.6424	0.6424
1989	0.4713	0.8340	0.4775	0.1144	0.4959	0.5589	0.5589
1990	0.6927	0.6362	0.9294	0.1141	1.0489	1.1042	1.1042
1991	0.5906	1.3477	0.9623	0.2230	0.4851	0.7459	0.7459
1992	0.3800	1.0232	0.5441	0.0675	0.2021	0.3829	0.3829
1993	0.4258	0.7383	0.3057	0.0156	0.2411	0.8702	0.8702
1994	0.3991	0.6585	0.1183	0.0376	0.1495	0.6476	0.6476
1995	0.4893	0.4584	0.3309	0.0508	0.8574	0.7644	0.7644
1996	0.4150	0.5250	0.6925	0.0890	0.4619	0.5274	0.5274
1997	0.5917	0.6211	0.6382	0.1425	0.0783	1.4580	1.4580
1998	0.4007	0.7960	0.1745	0.0544	0.3717	0.9491	0.9491
1999	0.5816	0.7806	0.2793	0.1142	0.1074	0.9631	0.9631
2000	0.4184	0.8811	0.1010	0.0819	0.0536	1.4040	1.4040
2001	0.3620	0.5676	0.1297	0.0742	0.1242	0.6295	0.6295
2002	0.5021	0.4210	0.1106	0.0621	0.1451	1.1326	1.1326
2003	0.4748	0.6978	0.1290	0.0696	0.2985	0.8728	0.8728
2004	0.4225	0.8177	0.1950	0.0722	0.2788	0.9223	0.9223
2005	0.4745	0.9143	0.2271	0.1215	0.4002	1.2172	1.2172
2006	0.6260	1.4872	0.8274	0.1267	0.1098	1.3638	1.3638
2007	0.5922	1.2334	1.0675	0.1390	0.1733	1.1102	1.1102
2008	0.4208	0.8207	0.8155	0.0715	0.0856	0.6700	0.6700
2009	0.5694	0.6906	0.3780	0.1498	0.1436	1.0491	1.0491
2010	0.3650	1.0891	0.3112	0.0471	0.0797	0.7000	0.7000

ER Stock Identifiers:			
Alaska Southeast	Age 4	Age 5	Age 6
Quinsam	Age 4	Age 5	
Robertson Creek	Age 3	Age 4	Age 5
Salmon River Hatchery	Age 4	Age 5	
Columbia Upriver Brights	Age 4	Age 5	
Willamette Spring Hatchery	Age 4	Age 5	

Table J.2. Alaska troll Stratified Proportion Fishery Index (SPFI) values as total mortality, based on CWT data.

YEAR	SPFI	WIN/SPR	JUNE IN	JUNE OUT	JULY IN	JULY OUT	FALL
1979	0.7982	1.0909	0.4960	1.0667	0.3893	0.7618	0.7618
1980	1.2144	0.6407	1.4765	0.9086	1.7594	1.4025	1.4025
1981	1.0964	1.2165	0.8845	1.0961	0.8054	1.0635	1.0635
1982	0.8910	1.0519	1.1430	0.9286	1.0458	0.7723	0.7723
1983	0.9832	1.0140	0.7336	0.6208	0.7217	1.6246	1.6246
1984	0.6503	0.3685	1.1472	0.9458	0.4180	0.6054	0.6054
1985	0.7723	0.4564	0.8678	0.5873	0.6725	1.0564	1.0564
1986	0.5338	0.4733	0.4487	0.1712	0.5993	1.3615	1.3615
1987	0.5686	0.5977	0.5500	0.1766	1.6730	0.7763	0.7763
1988	0.4275	1.2815	0.1566	0.0067	1.2275	0.6543	0.6543
1989	0.5261	0.8036	0.4615	0.1176	0.5702	0.6362	0.6362
1990	0.8651	0.7917	0.9852	0.1292	1.0295	1.4285	1.4285
1991	0.6121	1.2662	0.8870	0.2100	0.6101	0.7806	0.7806
1992	0.4341	0.9720	0.5038	0.0638	0.2094	0.5470	0.5470
1993	0.4695	0.7067	0.2790	0.0165	0.2427	1.0163	1.0163
1994	0.4757	0.6355	0.1452	0.0376	0.1962	0.8353	0.8353
1995	0.5913	0.4623	0.3462	0.0523	0.8726	0.9551	0.9551
1996	0.4961	0.5263	0.6522	0.0934	0.4852	0.6523	0.6523
1997	0.5853	0.6103	0.5839	0.1415	0.0960	1.4039	1.4039
1998	0.3826	0.7708	0.1714	0.0540	0.3249	0.8910	0.8910
1999	0.6336	0.7706	0.2649	0.1105	0.1450	1.0677	1.0677
2000	0.4379	0.8828	0.1041	0.0880	0.0812	1.4561	1.4561
2001	0.3773	0.5508	0.1207	0.0712	0.1533	0.6609	0.6609
2002	0.4928	0.4486	0.1105	0.0647	0.1607	1.0683	1.0683
2003	0.4603	0.7110	0.1245	0.0705	0.2725	0.8194	0.8194
2004	0.4135	0.8053	0.1820	0.0730	0.2764	0.8817	0.8817
2005	0.4894	1.0001	0.2934	0.1256	0.3713	1.1961	1.1961
2006	0.6256	1.4400	0.8106	0.1269	0.1170	1.3453	1.3453
2007	0.5857	1.2085	1.0607	0.1350	0.1636	1.0839	1.0839
2008	0.4328	0.7851	0.7474	0.0740	0.1088	0.6939	0.6939
2009	0.5851	0.7000	0.3631	0.1439	0.1668	1.0683	1.0683
2010	0.3773	1.0197	0.2888	0.0453	0.1156	0.7313	0.7313

ER Stock Identifiers:			
Alaska Southeast	Age 4	Age 5	Age 6
Quinsam	Age 4	Age 5	
Robertson Creek	Age 3	Age 4	Age 5
Salmon River Hatchery	Age 4	Age 5	
Columbia Upriver Brights	Age 4	Age 5	
Willamette Spring Hatchery	Age 4	Age 5	

Table J.3. Landed catch exploitation rate indices by stock and age in the NBC troll fishery, based on CWT data. Base period is 1979-1982.

Year	AKS Age 4	QUI Age 3	QUI Age 4	RBT Age 3	RBT Age 4	RBT Age 5	SRH Age 3	SRH Age 4	SRH Age 5	URB Age 3	URB Age 4	URB Age 5	WSH Age 4	Fishery Index
1979		0.5518	0.8708	1.1532	0.8274	0.4793	1.1602			0.4649	1.1919		0.6465	0.8212
1980		0.7998	0.979	1.0493	0.8534	0.7707		0.9276		1.1057	0.9895	1.2716	1.1844	0.9474
1981		1.7668	1.4495	0.853	1.0407	1.75	1.287		1		1.1507	1.3125	1.5276	1.2611
1982	1	0.8816	0.7006	0.9444	1.2784		0.5528	1.0724		1.4293	0.6679	0.4158	0.6416	0.8622
1983	1.5937	1.2301	1.4693	0.9825	0.7329	0.7472	0.5573	1.1766	0.2433	1.777	1.3026		1.2694	0.8204
1984	1.1163	0.2514	0.4964	0.387	1.3659	1.6741		1.4001	1.2846	1.0354	2.109		0.4581	1.2096
1985	0.7696	0.2513	0.5798	0.9468	1.865	1.6956	0.383		1.1846	1.4071	1.7151	1.68	0.201	1.2123
1986	0.7139	0.9403	0.8435		0.9164		0.1114	1.1439		1.0944	1.3846	1.9971		1.0272
1987	0.5981	0.3493	0.6247	0.4502			0.2007	0.7982	1.0153	1.2247	1.7667	2.8948		1.0212
1988	1.9941	0.186	0.6978	0.3025	0.6207			0.6551	0.336	0.3801	1.0793	2.3581	0.7892	0.6892
1989	0.9055	0.4342	0.4501	0.3696	0.8734	1.052	0.1335	0.5667	0.999		1.0354	4.2165	0.366	0.9793
1990	1.9084	0.3567	0.9621	0.2807	0.7122	0.5506	0.1745	0.5078	0.9293		1.2429	2.3816	0.3033	0.7986
1991	0.6355	0.4232	0.6661	0.3518	0.7112	1.0945	0.1327	0.845	0.9557				0.2776	0.7435
1992	0.1138		1.8674	0.2696	0.5727	0.6315	0.1205	0.519	0.4484				0.1004	0.5753
1993	0.2668			0.1493	0.6254	0.8366	0.1306	1.1336	1.0304	0	1.1507		0.2093	0.7591
1994	0.0498			0.2863	0.7591	0.8564	0.2168	1.117	0.9365		0.9339	2.0321	0.1175	0.8592
1995	0				0.409	0.2344	0.125	0	0.3983			0.5655	0.1516	0.299
1996	0			0			0	0	0	0	0		0	0
1997		0.3478	0.3966	0.1976	0.3957		0.1439	0.2407	0.2061		0.676		0.2681	0.299
1998	0		0		0.5627		0.0866	1.1411	0.5826	0		1.6437	0	0.5843
1999	0	0.1634	0.192		0.3378	0.5523	0.1038	0.4051	0.1927		1.1934		0	0.3457
2000	0	0	0.0619				0.0484	0.5739	0.1575		0	0	0.0137	0.1392
2001		0	0.0148	0			0.0473	0.3591	0.4181	0	0		0.0209	0.1957
2002	0.4654		0.1399	0	0.4623		0.1877	0.6242	0.7008	0.1041	0.1935		0.1862	0.4179
2003	0	0	0	0.0433	0.0506	0	0.0504	0.6201	0.2478		0.7616	0.8812	0.0525	0.2331
2004	0.9039	0	0.0553	0.0832	0.1943	0.4134	0.0921	0.5321	0.438	0	0.745	1.3773	0.191	0.3881
2005	0.1788	0.074	0.0424	0.0309	0.3207	0.1037	0.1119	0.953	0.4535	0.1214	1.4943	1.0619	0.0958	0.4229
2006	0.3733	0.0812	0.0669	0.0942	0.2574	0.2664	0.0375	1.0014	0.7268		1.4046	1.518	0.048	0.5366
2007	0.0884		0.4418		0.485	0.4941	0	0.5967	0.6645				0	0.48
2008	0.1031			0.0801	0.6195	0.1895	0.0737	0.6962		0.5347			0.0493	0.3409
2009	0.8652		0.1065	0.1846	0.204		0.0133	1.3452	0.9572		1.9267		0.0378	0.688
2010	0.1846	0		0.1713	0.0855		0.0615	1.0235	0.4202	0.1183			0.1427	0.327

Stock Identifiers:
AKS = ALASKA SPRING QUI = QUINSAM RBT = ROBERTSON CREEK SRH = SALMON RIVER HATCHERY
URB = COLUMBIA UPRIVER BRIGHT WSH = WILLAMETTE SPRING

Table J.4. NBC troll fishery Stratified Proportion Fishery Index (SPFI) values as landed catch, based on CWT data.

YEAR	SPFI
1979	0.9525
1980	0.8037
1981	1.2622
1982	0.9816
1983	0.9336
1984	0.9222
1985	0.9341
1986	0.7649
1987	0.7770
1988	0.6515
1989	0.6537
1990	0.5723
1991	0.6323
1992	0.4369
1993	0.4987
1994	0.6056
1995	0.2632
1996	0.0000
1997	0.2207
1998	0.4289
1999	0.2990
2000	0.0849
2001	0.0783
2002	0.2988
2003	0.2061
2004	0.2743
2005	0.3942
2006	0.3830
2007	0.3348
2008	0.2606
2009	0.5348
2010	0.2393

ER Stock Identifiers:			
Alaska Southeast	Age 4		
Quinsam	Age 3	Age 4	
Robertson Creek	Age 3	Age 4	Age 5
Salmon River Hatchery	Age 3	Age 4	Age 5
Columbia Upriver Brights	Age 3	Age 4	Age 5
Willamette Spring Hatchery	Age 4		

Table J.5. Total mortality exploitation rate indices by stock and age in the NBC troll fishery, based on CWT data. Base period is 1979-1982.

Year	AKS Age 4	QUI Age 3	QUI Age 4	RBT Age 3	RBT Age 4	RBT Age 5	SRH Age 3	SRH Age 4	SRH Age 5	URB Age 3	URB Age 4	URB Age 5	WSH Age 4	Fishery Index
1979		0.5679	0.8589	1.1627	0.8328	0.4758	1.1633			0.5384	1.197		0.6285	0.8272
1980		0.808	0.9829	1.0242	0.8544	0.7651		0.9342		1.0822	0.989	1.2681	1.1462	0.9456
1981		1.7527	1.4498	0.8497	1.0357	1.7592	1.2731		1		1.1568	1.3243	1.5233	1.2611
1982	1	0.8715	0.7083	0.9634	1.2771		0.5636	1.0658		1.3794	0.6572	0.4076	0.7021	0.8641
1983	1.6376	1.2113	1.4788	0.9748	0.7342	0.7555	0.6029	1.1764	0.2398	1.7175	1.2817		1.2502	0.8281
1984	1.1254	0.2619	0.5065	0.4902	1.3668	1.6856		1.4044	1.2857	1.0496	2.127		0.4596	1.2062
1985	0.8017	0.2742	0.5807	1.0926	1.8601	1.7214	0.4295		1.1854	1.3483	1.7179	1.6467	0.193	1.2095
1986	0.7312	0.9472	0.832		0.9138		0.16	1.1408		1.0984	1.3931	1.9575		1.0174
1987	0.6565	0.4607	0.6698	0.4826			0.3101	0.8307	1.0191	1.7427	1.8234	2.9208		1.0591
1988	2.1403	0.2657	0.7185	0.3376	0.6361			0.6785	0.3311	0.8629	1.1263	2.3892	0.8676	0.7201
1989	0.9552	0.5007	0.4756	0.4402	0.8808	1.0623	0.291	0.6068	1.0104		1.0898	4.2227	0.3829	0.9987
1990	2.2261	0.4776	1.0083	0.3558	0.7304	0.5642	0.2947	0.538	0.9486		1.2785	2.4381	0.3206	0.8292
1991	0.7387	0.5522	0.6869	0.4566	0.7248	1.1131	0.291	0.8728	0.965				0.3047	0.7728
1992	0.1838		1.9423	0.3768	0.5925	0.6513	0.1711	0.5402	0.4603				0.1102	0.5975
1993	0.2463			0.3003	0.6456	0.8591	0.271	1.1591	1.0472	0.2864	1.1741		0.2256	0.7902
1994	0.1149			0.5021	0.781	0.8742	0.3889	1.142	0.9438		0.9729	1.9918	0.1312	0.8869
1995	0.0518				0.4263	0.2437	0.185	0	0.4202			0.6047	0.1771	0.3184
1996	0.1292			0.0674			0.0777	0.0277	0.0279	0.3255	0.0656		0.0562	0.0565
1997		0.3795	0.3912	0.2553	0.3983		0.1702	0.2444	0.2031		0.6841		0.2517	0.3052
1998	0		0		0.5725		0.2108	1.1492	0.5855	0.0948		1.6111	0	0.5903
1999	0	0.1824	0.1894		0.3301	0.559	0.1355	0.4096	0.1899		1.2106		0	0.3451
2000	0	0	0.0611				0.0713	0.5712	0.1552		0	0	0.014	0.1383
2001		0	0.0146	0			0.0694	0.3631	0.412	0	0		0.0201	0.1899
2002	0.6014		0.138	0.0311	0.4722		0.2391	0.6341	0.7093	0.1567	0.1999		0.212	0.4263
2003	0.0804	0	0	0.0443	0.0529	0	0.1018	0.632	0.2499		0.7859	0.8957	0.0576	0.2381
2004	1.0013	0	0.0545	0.1276	0.2072	0.432	0.1692	0.5597	0.4584	0.1511	0.7612	1.431	0.2075	0.4086
2005	0.231	0.0661	0.0418	0.0632	0.3297	0.1029	0.226	0.9868	0.4668	0.5583	1.5631	1.1151	0.0981	0.4489
2006	0.4738	0.0725	0.066	0.1342	0.2591	0.2644	0.1344	0.9996	0.7294		1.4421	1.5115	0.0615	0.5392
2007	0.1142		0.4358		0.489	0.4905	0.043	0.6025	0.6805				0	0.4817
2008	0.0952			0.1229	0.641	0.1881	0.1257	0.7004		0.6559			0.0561	0.3562
2009	0.917		0.105	0.1943	0.1993		0.0656	1.3476	0.9635		1.9556		0.0323	0.6831
2010	0.2045	0		0.2048	0.0835		0.0886	1.0196	0.4256	0.1608			0.1366	0.3271

Stock Identifiers: AKS = ALASKA SPRING,QUI = QUINSAM,RBT = ROBERTSON CREEK,SRH = SALMON RIVER HATCHERY, URB = COLUMBIA UPRIVER BRIGHT, WSH = WILLAMETTE SPRING

Table J.6. NBC troll fishery Stratified Proportion Fishery Index (SPFI) values as total mortality, based on CWT data.

YEAR	SPFI
1979	0.9512
1980	0.7901
1981	1.2723
1982	0.9864
1983	0.9414
1984	0.9103
1985	0.9351
1986	0.7530
1987	0.8310
1988	0.6872
1989	0.7270
1990	0.6254
1991	0.6335
1992	0.4709
1993	0.5297
1994	0.5860
1995	0.2724
1996	0.0000
1997	0.2086
1998	0.4084
1999	0.2904
2000	0.1000
2001	0.0971
2002	0.3201
2003	0.2180
2004	0.2971
2005	0.3964
2006	0.3785
2007	0.3418
2008	0.2879
2009	0.5267
2010	0.2439

ER Stock Identifiers:			
Alaska Southeast	Age 4		
Quinsam	Age 3	Age 4	
Robertson Creek	Age 3	Age 4	Age 5
Salmon River Hatchery	Age 3	Age 4	Age 5
Columbia Upriver Brights	Age 3	Age 4	Age 5
Willamette Spring Hatchery	Age 4		

Table J.7. Landed catch exploitation rate indices by stock and age in the WCVI troll fishery, based on CWT data. Base period is 1979-1982.

	Stock Identifiers																								
Year	CWF Age 4	GAD Age 3	GAD Age 4	LRH Age 3	LRH Age 4	LRW Age 4	RBT Age 3	RBT Age 4	RBT Age 5	SAM Age 3	SAM Age 4	SAM Age 5	SPR Age 3	SPR Age 4	SPS Age 3	SPS Age 4	SRH Age 3	SRH Age 4	SUM Age 4	URB Age 3	URB Age 4	UWA Age 3	UWA Age 4	WSH Age 4	Fishery Index
1979				1.1104			1.1699	1.2538			1	1	0.9531	0.8254		1.1326	1.5652			1.4007	1.7463	0.6998	1.2158	1.022	1.0519
1980				0.5599	1.0008		1.4137	1.4316					1.1792	1.4073				1.0912	0.689	1.3379	0.9398	1.3881	0.8622	1.1095	1.0446
1981	0.7952	0.7113		1.1596	0.7525	0.8449	0.6691	0.5843	1				0.946	0.635	0.7165		0.4348		1.311	0.1996	0.891	0.8456	0.8862	0.6284	0.8532
1982	1.2048	1.2887	1	1.1701	1.2467	1.1551	0.7473	0.7304		1			0.9217	1.1322	1.2835	0.8674		0.9088		1.0618	0.4229	1.0666	1.0358	1.2401	1.0498
1983	1.3681		1.4117	1.67	1.6011	0.9588	0.4161	0.8449	1.8294		0.9585		1.4644	0.9302	1.6393	0.8863	1.4876			0.3814	0.4347	0.7071	1.0787	0.2726	1.1724
1984	1.2992	2.053		2.1471	2.734		1.3102	1.1108	1.0411			1.0865	1.3146	1.3687	1.6061	0.9605		0.3897		0.8753	1.2686	1.7457	0.7334	0.6415	1.4097
1985	0.8918		0.8411	1.221	1.0733		0.4974	0					0.5308	0.944	0.811	0.6527				0.7549	1.0273	0.8028	1.0099	0.4086	0.8521
1986	1.2739			1.2636	1.1619	0.4677		1.1007					1.1759	0.993	0.8867	1.066		0.183		1.464	0.7212	0.8526	1.0935		1.0522
1987	0.855			0.9421		1.4473	0.2716						0.4545		0.749	0.5034	0.2611	0.2167	0	0.9984	0.7876	0.3693	0.4044		0.5747
1988	0.8419	0.4247		1.1366	1.3038	1.0511	0.4442	0.576		0.6037			0.9897		0.2964	0.6813		0.6401	1.1543	0.0874	1.8871		0.7719	0.8661	0.9016
1989	0.5264	0.2499	0.4869	0.284	0.5362	0.5635	0.2187	0.3395	0	0.2089	0.5982		0.5792	0.3915	0.3455	0.3767	0.3351		0.7596		0.8919			0.541	0.4724
1990	0.7142	1.0829	0.9348	1.1499	0.3956	1.2067	0.6715	0.5141	1.4889	0.4082	0.8536		0.9194	0.7173	0.7373	0.8105	0.7062	0.4311	1.4837		1.6097			0.8327	0.8641
1991			0.9362	0.8045		0.7404	0.5913	0.5326	1.3599	0.2503	0.5661	1.0937	0.591	0.6218	0.4207	0.5213	0.9066	0.3555	0.4816					0.0782	0.6802
1992	1.1432		0.452	0.6551		0.3197	1.5342	2.4207	5.0713	1.0459	0.2631		0.4297	0.7339	0.7284	0.7163	1.2197	2.4894	0.7517					0.1696	0.8067
1993				1.1004	0.6425		1.1209	2.2779	2.4185	1.1194	0.421		0.5361	0.9909	1.0364	0.5145	1.1918	1.0802		0.6201	1.943			0.4396	0.8527
1994	0.1173					0.2234	0.5742	0.69	1.2765	0.0573	0.6989		0.8209	0.6289	0.2193	0.4576		0.3848			0.9391			0.254	0.5308
1995		0.2209				0.4315		0.4377	0.3239	0.159	0.3773		0.3549	0.3473	0.2772	0.2567	0.0366							0.118	0.3188
1996	0	0	0	0			0			0	0		0		0	0	0	0	0	0	0			0	0
1997	0.3396		0.221	0.7637			0	0.0641		0.035	0.2558		0.5031	0.4841	0.0354	0.2915	0	0.0361	0.0744		0.1101			0	0.3146
1998								0			0.0768		0.0448	0	0	0.0302	0	0	0	0.0152				0.0352	0.0272
1999		0.0475		0.0955					0		0.0731		0.0156		0.0201	0.0546	0	0	0.0261		0			0	0.0455
2000			1.2175	0.0958	1.8352						1.1001		0.0455	0.7574	0.035	0.7097	0	0	0.2148	0.1181	0.5096			0.0768	0.7194
2001		0.7074	1.2249	0.3038		0.7163	0			0.367	0.369		0.1439	0.5957	0.4479	0.5357	0	0.0544	0.4423	0.063	0.1686			0.1782	0.4939
2002	0.6071	0.1695	0.6693	0.3599	0.4891		0.016	0		0.2742	0.4155		0.2942	0.7487	0.437	0.5555	0	0	0.5317	0.0894	0.2113			0.3381	0.4617
2003	0.5538	0.1145	0.7321	0.3051	0.916	0.1243	0	0			0.5989		0.2989	0.589	0.3751	0.564	0	0	0.6017	0.1758	0.1059			0.5876	0.4971
2004		0.0781	1.1777	0.4082	1.0566	0.124	0.0328	0.021	0	0.1827	0.5416		0.3467	0.7962	0.351	0.8223	0.1798	0.2528	0.2579	0.1615	0.4899			2.1817	0.6045
2005	0.3036	0.7455	0.9615	0.7424	1.7719	0.123	0	0		0.1165	0.7946		0.8701	1.1755	0.5709	0.762	0.1639	0.2313	0.494	0.1302	0.4547			1.2461	0.7854
2006		0.2695	0.9305			0.4633	0	0	0	0.3782	0.7709		0.5622	1.3788	0.5246	0.7215	0.1645	0.2827	0.3318		0.7251			1.4556	0.6978
2007		0.9876	0.7962	0.7876				0.0184		1.2503	0.5671		0.6109	0.9249	1.0003	0.6912	0	0	0.4641		0.1331			0.2234	0.6739
2008		0.4674	0.3836	0.4508			0		0	0.7011	0.3359		0.2094		0.4941	0.3201	0.2375	0	0.0904	0.306				0.1701	0.312
2009	0	0.3064	0.5146	0.229	0.2374		0	0		0.6593	0.1567		0.1923	0.0542	0.5417	0.1856	0.0389	0.0384	0.362		0.1156			0.1119	0.2173
2010	0.1357	0.589	0.456	0.3234			0.0491	0.2541		0.9356	0.1339		0.3059		0.5248	0.1155	0	0	0.1329	0.119				0.2366	0.2595

Stock Identifiers

CWF = COWLITZ FALL TULE
GAD = G ADAMS FALL FING
LRH = LOWER RIVER TULE
LRW = LEWIS RIVER WILD
RBT = ROBERTSON CREEK
SAM = SAMISH FALL FING
SPR = SPRING CREEK TULE
SPS = SO SOUND FALL FING
SRH = SALMON RIVER HATCHERY
SUM = COL RIVER SUMMERS
URB = COLUMBIA UPRIVER BRIGHT
UWA = U OF W FALL ACCEL
WSH = WILLAMETTE SPRING
CHI = CHILLAWACK

Table J.8. WCVI troll fishery Stratified Proportion Fishery Index (SPFI) values as landed catch, based on CWT data.

YEAR	SPFI	FALL/WIN	SPRING	SUMMER
1979	1.0973	1.1609	1.1213	1.0173
1980	1.1336	0.8915	1.3077	1.1521
1981	0.8682	1.3963	0.7101	0.7979
1982	0.9010	0.5514	0.8609	1.0328
1983	1.0120	1.1430	0.7345	1.1129
1984	1.3512	0.8999	0.9080	1.6367
1985	1.1860	0.0000	0.5109	1.3995
1986	0.8184	0.1124	0.4866	1.2954
1987	1.3684	0.0000	0.0000	1.4037
1988	1.6863	0.0000	0.0000	1.7298
1989	0.8071	0.0000	0.0000	0.8279
1990	1.1152	0.0000	0.0487	1.6231
1991	0.5898	0.0000	0.0295	1.1092
1992	1.6587	0.2397	0.0000	1.9950
1993	0.7369	0.0445	0.0000	1.9562
1994	0.5209	0.0415	0.0000	1.1310
1995	0.5842	0.0000	0.0000	0.5993
1996	0.0000	0.0000	0.0000	0.0000
1997	0.4103	0.0000	0.0000	0.4208
1998	0.0172	0.0095	0.0546	0.0000
1999	0.1778	0.2562	0.0000	0.0000
2000	0.7161	2.1292	0.0662	0.0000
2001	0.1723	0.8031	0.3891	0.0533
2002	0.2269	0.3026	0.7523	0.0251
2003	0.5654	0.4883	0.6100	0.0000
2004	0.3950	1.1496	0.4522	0.1326
2005	0.6138	2.6813	0.3806	0.1231
2006	0.4169	1.8711	0.3497	0.1595
2007	0.3779	1.5426	0.7839	0.0373
2008	0.3851	0.4609	0.2990	0.3898
2009	0.1272	0.3230	0.3470	0.0330
2010	0.1071	0.0162	0.5828	0.0435

ER Stock Identifiers:			
Cowlitz Fall Tule	Age 4		
George Adams	Age 3	Age 4	
Lower River Hatchery	Age 3	Age 4	
Lewis River Wild	Age 4		
Robertson Creek	Age 3	Age 4	Age 5
Samish	Age 3	Age 4	
Spring Creek	Age 3	Age 4	
South Puget Sound Fingerling	Age 3	Age 4	
Salmon River Hatchery	Age 3	Age 4	Age 5
Columbia River Summers	Age 4		
Columbia Upriver Brights	Age 3	Age 4	
University of Washington	Age 3	Age 4	
Willamette Spring Hatchery	Age 4		
Chilliwack	Age 3	Age 4	

Table J.9. Total mortality exploitation rate indices by stock and age in the WCVI troll fishery, based on CWT data. Base period is 1979-1982.

	Stock Identifiers																							
Year	CWF Age 4	GAD Age 3	GAD Age 4	LRH Age 3	LRH Age 4	LRW Age 4	RBT Age 3	RBT Age 4	RBT Age 5	SAM Age 3	SAM Age 4	SAM Age 5	SPR Age 3	SPR Age 4	SPS Age 3	SPS Age 4	SRH Age 3	SRH Age 4	SUM Age 4	URB Age 3	URB Age 4	UWA Age 3	UWA Age 4	WSH Age 4	Fishery Index
1979				1.1011			1.2034	1.2541			1	1	0.9489	0.8274		1.1332	1.5304			1.3672	1.7543	0.6842	1.2229	1.0009	1.0477
1980				0.5665	0.9854		1.3823	1.4242					1.1609	1.4054				1.1006	0.6875	1.3153	0.9487	1.3453	0.8633	1.0966	1.0382
1981	0.786	0.7196		1.1513	0.741	0.8505	0.6631	0.5977	1				0.9272	0.632	0.7331		0.4696		1.3125	0.2667	0.8833	0.8158	0.8556	0.6364	0.8453
1982	1.214	1.2804	1	1.1811	1.2736	1.1495	0.7512	0.724		1			0.963	1.1352	1.2669	0.8668		0.8994		1.0508	0.4138	1.1547	1.0583	1.2662	1.0646
1983	1.3803		1.4051	1.6539	1.6184	0.9652	0.4496	0.8354	1.874		0.9571		1.411	0.9255	1.5805	0.8868	1.3994			0.3774	0.4253	0.6698	1.0638	0.3024	1.1629
1984	1.3152	1.893		2.1055	2.7623		1.3119	1.1108	1.0796			1.0844	1.2499	1.3293	1.5712	0.9643		0.3856		0.8546	1.2738	1.5704	0.7395	0.6399	1.3927
1985	0.9153		0.8355	1.2495	1.0946		0.4912	0					0.5583	0.9169	0.8114	0.6547				0.7659	1.0337	0.7307	1.014	0.4335	0.8531
1986	1.3181			1.1803	1.1441	0.4744		1.0956					1.1737	0.9874	0.9098	1.0586		0.1811		1.4294	0.7346	0.7953	1.0737		1.039
1987	0.8915			1.2161		1.4895	0.2974						0.4568		0.915	0.5212	0.3462	0.2502	0	1.1781	0.851	0.4162	0.427		0.6374
1988	0.9141	0.5066		1.3421	1.4365	1.0933	0.484	0.5913		0.7294			0.9962		0.387	0.7062		0.6877	1.2036	0.493	2.021		0.7945	0.9363	0.9728
1989	0.5549	0.3965	0.4996	0.3328	0.5866	0.5922	0.2386	0.3376	0	0.3766	0.6123		0.6329	0.4003	0.4198	0.3875	0.3949		0.7851		0.9621			0.564	0.505
1990	0.7647	1.1692	0.9488	1.1992	0.4545	1.2403	0.7132	0.5327	1.5462	0.5146	0.8637		0.9451	0.7402	0.9911	0.8438	0.81	0.4655	1.504		1.6799			0.9009	0.9088
1991			0.978	0.7667		0.7711	0.6637	0.5545	1.4031	0.4575	0.5858	1.0913	0.6237	0.6409	0.5631	0.5397	0.9539	0.3853	0.4849					0.0877	0.7029
1992	1.1689		0.4765	0.7841		0.3366	1.8985	2.5093	5.2393	1.0151	0.2729		0.5164	0.762	0.8159	0.7306	1.4156	2.5565	0.808					0.2475	0.8545
1993				1.253	0.7285		1.4899	2.3606	2.5348	1.2261	0.4435		0.6104	1.0195	1.1647	0.5291	1.5302	1.1677		0.941	2.0197			0.4677	0.9329
1994	0.1159					0.2443	0.6963	0.7294	1.3286	0.2687	0.7102		0.8664	0.6544	0.2584	0.4595		0.415			0.9869			0.276	0.5601
1995		0.2794				0.4839		0.4698	0.3599	0.2441	0.4158		0.4048	0.3823	0.3221	0.2778	0.0808							0.1377	0.3567
1996	0.0339	0.0766	0.0256	0.0619			0.0361			0.0683	0.0155		0.0428		0.0699	0.0213	0.0579	0.0123	0.0286	0.093	0.0619			0.0291	0.0378
1997	0.3357		0.2298	0.8909			0.0051	0.062		0.0994	0.2591		0.5809	0.5266	0.1345	0.305	0	0.0357	0.0791		0.1077			0	0.3502
1998								0			0.0747		0.0405	0	0	0.0294	0	0	0	0.0135				0.0316	0.0259
1999		0.0401		0.0861					0		0.0711		0.0142		0.0173	0.0532	0	0	0.0254		0			0	0.0427
2000			1.2131	0.0864	1.8573						1.0697		0.0493	0.7356	0.0302	0.7043	0	0	0.2085	0.1052	0.4985			0.069	0.6967
2001		0.6071	1.2636	0.2775		0.6962	0			0.3244	0.3588		0.1339	0.5786	0.3962	0.53	0	0.0538	0.4366	0.0655	0.1649			0.1636	0.4769
2002	0.6182	0.1571	0.662	0.3314	0.4949		0.0143	0		0.2339	0.4108		0.2722	0.7384	0.3906	0.5506	0	0	0.5252	0.0796	0.2157			0.3122	0.4476
2003	0.5474	0.0965	0.7238	0.2825	0.9161	0.1272	0	0			0.5823		0.277	0.5817	0.3298	0.5591	0	0	0.5933	0.1566	0.1036			0.5375	0.4802
2004		0.0658	1.1726	0.3819	1.0592	0.1206	0.0293	0.0203	0	0.1558	0.5266		0.322	0.7873	0.3125	0.8155	0.1702	0.2542	0.2549	0.1439	0.4793			2.0048	0.5836
2005	0.3	0.6567	0.9579	0.6984	1.7718	0.1195	0	0		0.0994	0.7857		0.806	1.16	0.502	0.7521	0.1448	0.236	0.4888	0.116	0.4516			1.1441	0.761
2006		0.2386	0.9275			0.4503	0	0	0	0.3461	0.7496		0.5222	1.3823	0.4665	0.7132	0.1454	0.2798	0.3264		0.7094			1.3387	0.6763
2007		0.8571	0.7915	0.71				0.0178		1.0869	0.5611		0.5526	0.8983	0.88	0.6856	0	0	0.4569		0.1302			0.2005	0.6434
2008		0.394	0.3754	0.4273			0		0	0.6176	0.3266		0.1929		0.4392	0.3119	0.2098	0	0.0878	0.2725				0.1527	0.2969
2009	0	0.2767	0.5037	0.2202	0.2337		0	0		0.5623	0.1524		0.1739	0.0527	0.4821	0.1808	0.0344	0.038	0.3556		0.1131			0.1005	0.209
2010	0.1341	0.5085	0.4463	0.2975			0.0439	0.2455		0.8184	0.1302		0.2832		0.4637	0.1125	0	0	0.1408	0.106				0.2124	0.2484

CWF = COWLITZ FALL TULE
GAD = G ADAMS FALL FING
LRH = LOWER RIVER TULE
LRW = LEWIS RIVER WILD
RBT = ROBERTSON CREEK
SAM = SAMISH FALL FING
SPR = SPRING CREEK TULE
SPS = SO SOUND FALL FING
SRH = SALMON RIVER HATCHERY
SUM = COL RIVER SUMMERS
URB = COLUMBIA UPRIVER BRIGHT
UWA = U OF W FALL ACCEL
WSH = WILLAMETTE SPRING
CHI = CHILLAWACK

Table J.10. WCVI troll fishery Stratified Proportion Fishery Index (SPFI) values as total mortality, based on CWT data.

YEAR	SPFI	FALL/WIN	SPRING	SUMMER
1979	1.0825	1.1275	1.1059	1.0108
1980	1.1222	0.8729	1.3004	1.1410
1981	0.8805	1.4070	0.7286	0.8055
1982	0.9148	0.5925	0.8650	1.0427
1983	0.9837	1.1007	0.7110	1.0876
1984	1.3436	0.8812	0.9017	1.6299
1985	1.1675	0.0000	0.4979	1.3790
1986	0.8049	0.1040	0.4714	1.2801
1987	1.5272	0.0000	0.0000	1.5649
1988	1.7456	0.0000	0.0000	1.7886
1989	0.9314	0.0000	0.0000	0.9544
1990	1.1413	0.0000	0.0476	1.6607
1991	0.6327	0.0000	0.0288	1.1922
1992	1.7017	0.2433	0.0000	2.0448
1993	0.7559	0.0412	0.0000	2.0101
1994	0.5256	0.0384	0.0000	1.1430
1995	0.6550	0.0000	0.0000	0.6711
1996	0.0000	0.0000	0.0000	0.0000
1997	0.3904	0.0000	0.0000	0.4000
1998	0.0158	0.0088	0.0504	0.0000
1999	0.1673	0.2419	0.0000	0.0000
2000	0.6700	2.0008	0.0610	0.0000
2001	0.1615	0.7553	0.3661	0.0497
2002	0.2131	0.2849	0.7064	0.0236
2003	0.5301	0.4583	0.5726	0.0000
2004	0.3709	1.0837	0.4245	0.1241
2005	0.5759	2.5263	0.3565	0.1149
2006	0.3906	1.7564	0.3293	0.1488
2007	0.3535	1.4467	0.7350	0.0343
2008	0.3606	0.4261	0.2816	0.3645
2009	0.1187	0.2987	0.3239	0.0313
2010	0.1003	0.0150	0.5469	0.0405

ER Stock Identifiers:			
Cowlitz Fall Tule	Age 4		
George Adams	Age 3	Age 4	
Lower River Hatchery	Age 3	Age 4	
Lewis River Wild	Age 4		
Robertson Creek	Age 3	Age 4	Age 5
Samish	Age 3	Age 4	
Spring Creek	Age 3	Age 4	
South Puget Sound Fingerling	Age 3	Age 4	
Salmon River Hatchery	Age 3	Age 4	Age 5
Columbia River Summers	Age 4		
Columbia Upriver Brights	Age 3	Age 4	
University of Washington	Age 3	Age 4	
Willamette Spring Hatchery	Age 4		
Chilliwack	Age 3	Age 4	

Appendix K Issues with ERA and model calibration

Issues with CWT Data

Alaska Spring

- As in previous years, the rack return, cost-recovery, personal use and stray recoveries for AKS were imported as auxiliary data.

Chilkat, Unuk and Taku Spring

- The escapement and stray recoveries for CHK, UNU and TAK were imported as auxiliary data.

Canadian Stocks

- As in previous years, the escapement, rack return and stray recoveries for ATN, ATS, BQR, CHE, CHI, COW, DOM, HAR, KLM, NAN, NIC, PPS, QUI, RBT and SHU were imported as auxiliary data. Also, 2012 is the first year in which a complete time series of ERA results is provided for the Atnarko (ATN) stock. Given this, a narrative describing the steps taken in order to make ATN data useable in the ERA is provided at the end of this appendix.

Elk River

- Corrections to the terminal sport recoveries from 1979 through 1996 for ELK were imported as auxiliary data.

Salmon River Hatchery

- Corrections to the escapement recoveries from 1979 through 1983 for SRH were imported as auxiliary data.

Changes from Previous Calibration Procedures

Changes to the Input Data for the Chinook Model calibration.

CNR File

SEAK Troll - SEAK troll catch estimates from 1985-2010 were changed to treaty catch instead of total catch. SEAK troll encounter estimates from 1985-2010 were changed to treaty catch by multiplying by the SEAK troll treaty catch to total catch ratio.

SEAK Net - SEAK net catch estimates from 1985-2010 were changed to treaty catch instead of total catch. SEAK net encounter estimates from 1985-2010 were changed to treaty catch by multiplying by the SEAK net treaty catch to total catch ratio.

CEI File

SEAK Troll, Net, and Sport - SEAK treaty catch estimates from 2005-2010 were changed because terminal exclusion is now calculated only for statistical weeks 17-29 and the sport terminal exclusions are now calculated using GSI instead of CWTs.

Maturation and Adult Equivalent (MATAEQ DAT) File

Fraser Late Maturation Rates and AEQ Values – The age 3 and age 4 FRL maturation rates for incomplete broods were changed from the recent 5 year average to the long-term average so that the rates for FRL were consistent with those of the other stocks in the MATAEQ file. This resulted in new age 3 and age 4 adult equivalent values for the incomplete FRL broods as well.

Additional Notes or Comments on the Current ERA and Model Calibration

Narrative on Atnarko Exploitation Rate Indicator Stock

Although Atnarko Chinook have been CWTed since 1976, this is the first year that distribution tables for Atnarko Summer Chinook are included in a CTC Exploitation Rate Analysis and Model Calibration report. Despite the Bella Coola River watershed having had the most intensive Chinook stock assessments in central British Columbia, including the most thorough escapement assessment in the region, significant issues prevented the inclusion of this population as a CWT indicator stock in PSC assessments: (i) a need for validation of the quality of estimates of total escapement; (ii) the need for adequate sampling allowing estimation of freshwater CWT recoveries; (iii) data coordination reporting problems; and, (iv) limitations of funds to conduct robust and effective sampling and analysis. A recent investigation by Vélez-Espino et al. (2011) compiled reliable CWT data and generated crucial information about the exploitation history of Atnarko Chinook salmon, including: (i) filtering CWT recoveries by release type and site; (ii) validating and calibrating escapement estimates from a time period exhibiting a consistent methodology; (iii) developing methods to generate catch sampling fractions for First Nations and recreational fisheries; and, (iv) developing methods to generate CWT pseudo-

recoveries from recent years for the commercial net fishery in the Bella Coola River, and for the escapement for brood years 1976-1978 that contribute to the base period 1979-1982. These steps enabled the incorporation of Atnarko Summer Chinook as an exploitation rate indicator stock in current PSC assessments. Although significant effort had been placed on maintaining Atnarko Chinook escapement estimation procedures (see Vélez-Espino et al. 2010) and CWT release and recovery programs, only now have escapement estimates been validated and missing data for freshwater CWT recoveries been addressed to allow successful cohort analyses of this stock.

Vélez-Espino, L.A., Mullins, G., Willis, J., Krimmer, A., and Levesque, W. 2010. Mark-recapture experiment for the 2009 Chinook salmon spawning escapement in the Atnarko River. Can. Manuscr. Rep. Fish. Aquat. Sci. 2930: xii + 51 p.

Vélez-Espino, L.A., Willis, J., Parken, C.K., and Brown, G. 2011. Cohort analyses and new developments for coded wire tag data of Atnarko River Chinook salmon. Can. Manuscr. Rep. Fish. Aquat. Sci. 2958: xiii + 68 p.